

# Supplementary Data for “The Weights can be Harmful: Pareto Search versus Weighted Search in Multi-Objective Search-Based Software Engineering”

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Table 1. SOGA on wc-c1-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	1.000 (0.697)	1	1.000 (0.000)	1	0.020 (0.303)	1	1.000 (0.000)	Eval.
(0.2, 0.8)	1	0.873 (0.853)	1	0.873 (0.127)	1	0.147 (0.514)	1	0.873 (0.127)	Eval.
(0.3, 0.7)	1	0.714 (0.207)	1	0.857 (0.286)	1	0.203 (0.505)	1	0.857 (0.286)	Eval.
(0.4, 0.6)	1	0.701 (0.299)	1	0.711 (0.449)	1	0.173 (0.694)	1	0.850 (0.299)	Eval.
(0.5, 0.5)	1	0.551 (0.449)	1	0.701 (0.299)	2	0.346 (0.765)	1	0.701 (0.449)	Eval.
(0.6, 0.4)	1	0.563 (0.784)	1	0.782 (0.655)	2	0.386 (0.987)	1	0.782 (0.655)	Eval.
(0.7, 0.3)	1	0.396 (0.469)	1	0.396 (0.626)	2	0.396 (1.000)	1	0.396 (0.626)	Eval.
(0.8, 0.2)	1	0.190 (0.380)	1	0.285 (0.380)	2	0.374 (0.955)	1	0.285 (0.380)	Eval.
(0.9, 0.1)	1	0.184 (0.321)	1	0.219 (0.342)	2	0.350 (0.842)	1	0.252 (0.342)	Eval.
(0.1, 0.9)	1	0.166 (0.354)	1	0.249 (0.416)	1	0.328 (0.961)	1	0.249 (0.499)	Time
(0.2, 0.8)	1	0.229 (0.486)	1	0.315 (0.427)	1	0.395 (0.905)	1	0.353 (0.342)	Time
(0.3, 0.7)	1	0.296 (0.453)	1	0.395 (0.395)	1	0.299 (0.958)	1	0.395 (0.395)	Time
(0.4, 0.6)	1	0.324 (0.460)	1	0.373 (0.432)	1	0.324 (0.949)	1	0.432 (0.432)	Time
(0.5, 0.5)	1	0.324 (0.432)	1	0.324 (0.432)	2	0.324 (0.949)	1	0.324 (0.432)	Time
(0.6, 0.4)	1	0.179 (0.405)	1	0.292 (0.453)	2	0.398 (0.994)	1	0.292 (0.453)	Time
(0.7, 0.3)	1	0.197 (0.395)	1	0.296 (0.395)	2	0.389 (0.954)	1	0.296 (0.395)	Time
(0.8, 0.2)	1	0.167 (0.334)	1	0.250 (0.417)	2	0.330 (0.917)	1	0.250 (0.417)	Time
(0.9, 0.1)	1	0.184 (0.321)	1	0.219 (0.342)	2	0.350 (0.842)	1	0.252 (0.342)	Time

Table 2. HC on wc-c1-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.164 (0.328)	2	0.246 (0.410)	1	0.324 (0.918)	2	0.246 (0.410)	Eval.
(0.2, 0.8)	2	0.167 (0.412)	2	0.250 (0.417)	1	0.329 (0.961)	2	0.250 (0.417)	Eval.
(0.3, 0.7)	2	0.230 (0.454)	2	0.272 (0.454)	1	0.357 (0.957)	2	0.272 (0.454)	Eval.
(0.4, 0.6)	1	0.283 (0.471)	1	0.283 (0.471)	1	0.372 (0.956)	2	0.283 (0.442)	Eval.
(0.5, 0.5)	1	0.296 (0.494)	1	0.296 (0.395)	1	0.389 (0.954)	1	0.296 (0.494)	Eval.
(0.6, 0.4)	1	0.296 (0.494)	1	0.296 (0.395)	1	0.389 (0.901)	1	0.296 (0.494)	Eval.
(0.7, 0.3)	1	0.254 (0.424)	1	0.254 (0.396)	2	0.335 (0.915)	1	0.254 (0.424)	Eval.
(0.8, 0.2)	1	0.235 (0.391)	1	0.235 (0.328)	2	0.333 (0.873)	1	0.235 (0.391)	Eval.
(0.9, 0.1)	1	0.167 (0.331)	1	0.198 (0.303)	1	0.303 (0.892)	1	0.198 (0.334)	Eval.
(0.1, 0.9)	2	0.207 (0.344)	2	0.207 (0.327)	1	0.294 (0.931)	2	0.209 (0.344)	Time
(0.2, 0.8)	2	0.215 (0.359)	2	0.217 (0.337)	1	0.287 (0.966)	2	0.255 (0.359)	Time
(0.3, 0.7)	2	0.235 (0.408)	2	0.277 (0.391)	1	0.309 (0.963)	2	0.313 (0.391)	Time
(0.4, 0.6)	1	0.215 (0.439)	1	0.260 (0.417)	1	0.294 (0.996)	2	0.298 (0.417)	Time
(0.5, 0.5)	1	0.183 (0.422)	1	0.232 (0.445)	1	0.268 (0.995)	1	0.272 (0.445)	Time
(0.6, 0.4)	1	0.179 (0.419)	1	0.219 (0.447)	1	0.264 (1.000)	1	0.268 (0.447)	Time
(0.7, 0.3)	1	0.170 (0.398)	1	0.208 (0.424)	2	0.254 (0.973)	1	0.254 (0.424)	Time
(0.8, 0.2)	1	0.151 (0.348)	1	0.184 (0.367)	2	0.252 (0.950)	1	0.224 (0.367)	Time
(0.9, 0.1)	1	0.148 (0.303)	1	0.174 (0.287)	1	0.260 (0.931)	1	0.180 (0.287)	Time

Table 3. RS on wc-c1-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.132 (0.325)	2	0.161 (0.321)	1	0.220 (0.976)	2	0.196 (0.321)	Eval.
(0.2, 0.8)	2	0.142 (0.354)	2	0.180 (0.354)	1	0.231 (1.000)	2	0.212 (0.354)	Eval.
(0.3, 0.7)	2	0.212 (0.355)	2	0.251 (0.355)	1	0.251 (1.000)	2	0.251 (0.355)	Eval.
(0.4, 0.6)	1	0.186 (0.380)	1	0.228 (0.380)	1	0.228 (1.000)	2	0.228 (0.380)	Eval.
(0.5, 0.5)	1	0.190 (0.387)	1	0.232 (0.387)	1	0.229 (1.000)	1	0.232 (0.397)	Eval.
(0.6, 0.4)	1	0.192 (0.391)	1	0.235 (0.391)	1	0.231 (1.000)	1	0.235 (0.439)	Eval.
(0.7, 0.3)	1	0.185 (0.378)	1	0.227 (0.378)	2	0.227 (0.976)	1	0.227 (0.424)	Eval.
(0.8, 0.2)	1	0.158 (0.322)	1	0.186 (0.322)	2	0.215 (0.960)	1	0.193 (0.360)	Eval.
(0.9, 0.1)	1	0.093 (0.229)	1	0.117 (0.229)	2	0.164 (0.971)	1	0.137 (0.234)	Eval.
(0.1, 0.9)	2	0.124 (0.254)	2	0.152 (0.254)	1	0.169 (0.984)	2	0.152 (0.284)	Time
(0.2, 0.8)	2	0.146 (0.297)	2	0.178 (0.297)	1	0.194 (1.000)	2	0.178 (0.340)	Time
(0.3, 0.7)	2	0.164 (0.322)	2	0.193 (0.322)	1	0.193 (1.000)	2	0.193 (0.390)	Time
(0.4, 0.6)	1	0.180 (0.354)	1	0.212 (0.354)	1	0.212 (1.000)	2	0.212 (0.464)	Time
(0.5, 0.5)	1	0.182 (0.367)	1	0.214 (0.357)	1	0.214 (1.000)	1	0.214 (0.453)	Time
(0.6, 0.4)	1	0.188 (0.379)	1	0.221 (0.379)	1	0.218 (1.000)	1	0.221 (0.495)	Time
(0.7, 0.3)	1	0.180 (0.364)	1	0.212 (0.364)	2	0.212 (0.977)	1	0.212 (0.448)	Time
(0.8, 0.2)	1	0.129 (0.261)	1	0.152 (0.256)	2	0.169 (0.968)	1	0.152 (0.332)	Time
(0.9, 0.1)	1	0.003 (0.005)	1	0.003 (0.005)	2	0.004 (0.999)	1	0.003 (0.006)	Time

Table 4. SA on wc-c1-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.106 (0.214)	2	0.125 (0.210)	1	0.139 (0.987)	2	0.125 (0.252)	Eval.
(0.2, 0.8)	3	0.137 (0.243)	2	0.137 (0.235)	1	0.149 (0.985)	2	0.137 (0.263)	Eval.
(0.3, 0.7)	3	0.152 (0.285)	2	0.152 (0.261)	1	0.152 (1.000)	2	0.152 (0.280)	Eval.
(0.4, 0.6)	2	0.178 (0.333)	2	0.178 (0.333)	2	0.178 (1.000)	1	0.178 (0.321)	Eval.
(0.5, 0.5)	2	0.191 (0.381)	2	0.191 (0.358)	2	0.191 (0.980)	1	0.191 (0.314)	Eval.
(0.6, 0.4)	2	0.204 (0.406)	2	0.204 (0.382)	2	0.204 (0.978)	1	0.204 (0.329)	Eval.
(0.7, 0.3)	2	0.178 (0.355)	2	0.178 (0.339)	3	0.198 (0.963)	1	0.178 (0.297)	Eval.
(0.8, 0.2)	1	0.126 (0.252)	1	0.126 (0.240)	2	0.145 (0.974)	1	0.126 (0.211)	Eval.
(0.9, 0.1)	1	0.003 (0.006)	1	0.003 (0.006)	2	0.004 (0.999)	1	0.003 (0.005)	Eval.
(0.1, 0.9)	2	0.003 (0.006)	2	0.003 (0.006)	1	0.004 (0.999)	2	0.003 (0.005)	Time
(0.2, 0.8)	3	0.090 (0.181)	2	0.090 (0.172)	1	0.100 (0.981)	2	0.090 (0.150)	Time
(0.3, 0.7)	3	0.126 (0.256)	2	0.126 (0.252)	1	0.141 (0.987)	2	0.126 (0.211)	Time
(0.4, 0.6)	2	0.142 (0.309)	2	0.142 (0.282)	2	0.157 (0.985)	1	0.142 (0.236)	Time
(0.5, 0.5)	2	0.171 (0.374)	2	0.171 (0.333)	2	0.190 (0.982)	1	0.171 (0.285)	Time
(0.6, 0.4)	2	0.178 (0.412)	2	0.178 (0.349)	2	0.198 (0.963)	1	0.178 (0.297)	Time
(0.7, 0.3)	2	0.149 (0.344)	2	0.149 (0.292)	3	0.168 (0.969)	1	0.149 (0.249)	Time
(0.8, 0.2)	1	0.003 (0.007)	1	0.003 (0.006)	2	0.004 (0.999)	1	0.003 (0.005)	Time
(0.9, 0.1)	1	0.003 (0.007)	1	0.003 (0.006)	2	0.004 (0.999)	1	0.003 (0.005)	Time

Table 5. SOGA on wc-c3-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.664 (0.791)	2	0.664 (0.828)	1	0.179 (0.377)	2	0.470 (0.828)	Eval.
(0.2, 0.8)	2	0.609 (0.904)	2	0.639 (0.970)	1	0.039 (0.272)	2	0.381 (0.859)	Eval.
(0.3, 0.7)	2	0.651 (0.888)	2	0.651 (0.948)	1	0.068 (0.179)	2	0.415 (0.857)	Eval.
(0.4, 0.6)	1	0.674 (0.931)	1	0.674 (0.947)	1	0.082 (0.363)	1	0.423 (0.810)	Eval.
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (1.000)	1	0.000 (0.000)	Eval.
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (1.000)	1	0.000 (0.000)	Eval.
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.589 (1.000)	1	0.000 (0.000)	Eval.
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.521 (1.000)	1	0.000 (0.000)	Eval.
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.422 (1.000)	1	0.000 (0.000)	Eval.
(0.1, 0.9)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.298 (1.000)	2	0.000 (0.000)	Time
(0.2, 0.8)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.263 (1.000)	2	0.000 (0.000)	Time
(0.3, 0.7)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.000 (1.000)	2	0.000 (0.001)	Time
(0.4, 0.6)	1	0.000 (0.001)	1	0.000 (0.001)	1	0.000 (1.000)	1	0.000 (0.001)	Time
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.229 (1.000)	1	0.000 (0.000)	Time
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.251 (1.000)	1	0.000 (0.000)	Time
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.465 (1.000)	1	0.000 (0.000)	Time
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.422 (1.000)	1	0.000 (0.000)	Time

Table 6. HC on wc-c3-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.281 (1.000)	2	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.298 (1.000)	2	0.000 (0.000)	Eval.
(0.3, 0.7)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.312 (1.000)	2	0.000 (0.001)	Eval.
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.251 (1.000)	1	0.000 (0.000)	Eval.
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.256 (1.000)	1	0.000 (0.000)	Eval.
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.401 (1.000)	1	0.000 (0.000)	Eval.
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Eval.
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Eval.
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.480 (1.000)	1	0.000 (0.000)	Eval.
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.422 (1.000)	2	0.000 (0.000)	Time
(0.2, 0.8)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.269 (1.000)	2	0.000 (0.000)	Time
(0.3, 0.7)	2	0.000 (0.001)	2	0.000 (0.001)	1	0.281 (1.000)	2	0.000 (0.000)	Time
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.269 (1.000)	1	0.000 (0.000)	Time
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.401 (1.000)	1	0.000 (0.000)	Time
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.456 (1.000)	1	0.000 (0.000)	Time
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Time
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time

Table 7. RS on wc-c3-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.422 (1.000)	2	0.000 (0.000)	Eval.
(0.3, 0.7)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.269 (1.000)	2	0.000 (0.000)	Eval.
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.422 (1.000)	1	0.000 (0.000)	Eval.
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.456 (1.000)	1	0.000 (0.000)	Eval.
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.476 (1.000)	1	0.000 (0.000)	Eval.
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Eval.
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Eval.
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Eval.
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Time
(0.2, 0.8)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.459 (1.000)	2	0.000 (0.000)	Time
(0.3, 0.7)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.422 (1.000)	2	0.000 (0.000)	Time
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.459 (1.000)	1	0.000 (0.000)	Time
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.456 (1.000)	1	0.000 (0.000)	Time
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.476 (1.000)	1	0.000 (0.000)	Time
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Time
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time

Table 8. SA on wc-c3-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Eval.
(0.3, 0.7)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.423 (1.000)	2	0.000 (0.000)	Eval.
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.480 (1.000)	1	0.000 (0.000)	Eval.
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.464 (1.000)	1	0.000 (0.000)	Eval.
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Eval.
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Eval.
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Eval.
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Eval.
(0.1, 0.9)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Time
(0.2, 0.8)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.480 (1.000)	2	0.000 (0.000)	Time
(0.3, 0.7)	2	0.000 (0.000)	2	0.000 (0.000)	1	0.459 (1.000)	2	0.000 (0.000)	Time
(0.4, 0.6)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.480 (1.000)	1	0.000 (0.000)	Time
(0.5, 0.5)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.465 (1.000)	1	0.000 (0.000)	Time
(0.6, 0.4)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Time
(0.7, 0.3)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.485 (1.000)	1	0.000 (0.000)	Time
(0.8, 0.2)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time
(0.9, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.501 (1.000)	1	0.000 (0.000)	Time

Table 9. SOGA on wc-c4-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.021 (0.056)	1	0.056 (0.218)	2	1.000 (0.005)	1	0.021 (0.056)	Eval.
(0.2, 0.8)	1	0.157 (0.169)	1	0.157 (0.154)	2	0.996 (0.598)	1	0.157 (0.169)	Eval.
(0.3, 0.7)	1	0.097 (0.153)	1	0.097 (0.111)	2	0.623 (0.755)	1	0.097 (0.153)	Eval.
(0.4, 0.6)	1	0.049 (0.092)	1	0.049 (0.092)	2	0.707 (0.587)	1	0.049 (0.092)	Eval.
(0.5, 0.5)	1	0.066 (0.134)	1	0.048 (0.114)	2	0.706 (0.589)	1	0.060 (0.114)	Eval.
(0.6, 0.4)	1	0.067 (0.124)	1	0.067 (0.122)	2	0.651 (0.683)	1	0.067 (0.122)	Eval.
(0.7, 0.3)	1	0.070 (0.123)	2	0.070 (0.109)	3	0.631 (0.741)	1	0.057 (0.109)	Eval.
(0.8, 0.2)	1	0.056 (0.112)	1	0.056 (0.112)	2	0.619 (0.575)	1	0.056 (0.112)	Eval.
(0.9, 0.1)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Eval.
(0.1, 0.9)	1	0.060 (0.115)	1	0.060 (0.115)	2	0.532 (0.783)	1	0.060 (0.115)	Time
(0.2, 0.8)	1	0.060 (0.116)	1	0.060 (0.115)	2	0.531 (0.782)	1	0.049 (0.115)	Time
(0.3, 0.7)	1	0.054 (0.131)	1	0.054 (0.128)	2	0.529 (0.743)	1	0.054 (0.122)	Time
(0.4, 0.6)	1	0.054 (0.129)	1	0.054 (0.109)	2	0.628 (0.742)	1	0.054 (0.109)	Time
(0.5, 0.5)	1	0.070 (0.122)	1	0.070 (0.109)	2	0.629 (0.742)	1	0.057 (0.109)	Time
(0.6, 0.4)	1	0.064 (0.120)	1	0.063 (0.100)	2	0.626 (0.748)	1	0.063 (0.102)	Time
(0.7, 0.3)	1	0.056 (0.112)	2	0.045 (0.112)	3	0.619 (0.575)	1	0.045 (0.112)	Time
(0.8, 0.2)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Time
(0.9, 0.1)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Time

Table 10. HC on wc-c4-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.062 (0.113)	1	0.062 (0.112)	2	0.684 (0.788)	1	0.054 (0.109)	Eval.
(0.2, 0.8)	1	0.060 (0.113)	1	0.060 (0.115)	2	0.532 (0.783)	1	0.060 (0.115)	Eval.
(0.3, 0.7)	1	0.060 (0.108)	1	0.060 (0.108)	2	0.530 (0.783)	1	0.060 (0.115)	Eval.
(0.4, 0.6)	1	0.053 (0.108)	1	0.052 (0.107)	2	0.527 (0.788)	1	0.052 (0.109)	Eval.
(0.5, 0.5)	1	0.052 (0.107)	1	0.052 (0.101)	2	0.529 (0.788)	1	0.052 (0.101)	Eval.
(0.6, 0.4)	1	0.045 (0.112)	1	0.045 (0.107)	2	0.619 (0.575)	1	0.045 (0.107)	Eval.
(0.7, 0.3)	1	0.047 (0.094)	2	0.047 (0.094)	3	0.678 (0.642)	2	0.047 (0.094)	Eval.
(0.8, 0.2)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Eval.
(0.9, 0.1)	1	0.052 (0.100)	1	0.047 (0.099)	2	0.679 (0.643)	1	0.047 (0.099)	Eval.
(0.1, 0.9)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Time
(0.2, 0.8)	1	0.062 (0.113)	1	0.062 (0.112)	2	0.682 (0.788)	1	0.054 (0.114)	Time
(0.3, 0.7)	1	0.052 (0.112)	1	0.052 (0.107)	2	0.528 (0.789)	1	0.052 (0.107)	Time
(0.4, 0.6)	1	0.052 (0.107)	1	0.052 (0.107)	2	0.527 (0.789)	1	0.052 (0.107)	Time
(0.5, 0.5)	1	0.038 (0.094)	1	0.038 (0.094)	2	0.522 (0.642)	1	0.038 (0.094)	Time
(0.6, 0.4)	1	0.047 (0.094)	1	0.047 (0.094)	2	0.678 (0.642)	1	0.047 (0.094)	Time
(0.7, 0.3)	1	0.047 (0.099)	2	0.047 (0.094)	3	0.677 (0.642)	2	0.047 (0.099)	Time
(0.8, 0.2)	1	0.047 (0.100)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Time
(0.9, 0.1)	1	0.057 (0.100)	1	0.047 (0.100)	2	0.679 (0.643)	1	0.047 (0.100)	Time

Table 11. RS on wc-c4-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.047 (0.100)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Eval.
(0.2, 0.8)	1	0.061 (0.112)	1	0.061 (0.112)	2	0.682 (0.789)	1	0.061 (0.112)	Eval.
(0.3, 0.7)	1	0.061 (0.112)	1	0.052 (0.109)	2	0.681 (0.789)	1	0.052 (0.112)	Eval.
(0.4, 0.6)	1	0.038 (0.099)	1	0.038 (0.094)	2	0.522 (0.642)	1	0.038 (0.099)	Eval.
(0.5, 0.5)	1	0.047 (0.099)	1	0.047 (0.094)	2	0.677 (0.642)	1	0.038 (0.096)	Eval.
(0.6, 0.4)	1	0.047 (0.099)	1	0.047 (0.094)	2	0.677 (0.642)	1	0.047 (0.096)	Eval.
(0.7, 0.3)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Eval.
(0.8, 0.2)	1	0.050 (0.104)	1	0.047 (0.100)	2	0.679 (0.642)	1	0.047 (0.100)	Eval.
(0.9, 0.1)	1	0.052 (0.104)	1	0.047 (0.104)	2	0.679 (0.643)	1	0.047 (0.100)	Eval.
(0.1, 0.9)	1	0.047 (0.100)	1	0.047 (0.100)	2	0.679 (0.642)	1	0.047 (0.100)	Time
(0.2, 0.8)	1	0.061 (0.112)	1	0.061 (0.109)	2	0.684 (0.789)	1	0.061 (0.112)	Time
(0.3, 0.7)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Time
(0.4, 0.6)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.038 (0.099)	Time
(0.5, 0.5)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Time
(0.6, 0.4)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Time
(0.7, 0.3)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.099)	Time
(0.8, 0.2)	1	0.053 (0.104)	1	0.047 (0.106)	2	0.679 (0.642)	1	0.047 (0.104)	Time
(0.9, 0.1)	1	0.052 (0.104)	1	0.047 (0.112)	2	0.679 (0.643)	1	0.047 (0.106)	Time

Table 12. SA on wc-c4-3D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.047 (0.100)	1	0.047 (0.104)	2	0.678 (0.643)	1	0.047 (0.100)	Eval.
(0.2, 0.8)	1	0.047 (0.100)	1	0.047 (0.100)	2	0.679 (0.642)	1	0.047 (0.100)	Eval.
(0.3, 0.7)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Eval.
(0.4, 0.6)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Eval.
(0.5, 0.5)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Eval.
(0.6, 0.4)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.099)	Eval.
(0.7, 0.3)	1	0.047 (0.100)	1	0.047 (0.100)	2	0.679 (0.642)	1	0.047 (0.100)	Eval.
(0.8, 0.2)	1	0.053 (0.106)	1	0.047 (0.112)	2	0.680 (0.642)	1	0.047 (0.112)	Eval.
(0.9, 0.1)	1	0.052 (0.112)	1	0.047 (0.113)	2	0.679 (0.643)	1	0.050 (0.112)	Eval.
(0.1, 0.9)	1	0.050 (0.104)	1	0.047 (0.112)	2	0.679 (0.643)	1	0.047 (0.106)	Time
(0.2, 0.8)	1	0.047 (0.100)	1	0.047 (0.104)	2	0.679 (0.642)	1	0.047 (0.104)	Time
(0.3, 0.7)	1	0.047 (0.100)	1	0.047 (0.100)	2	0.677 (0.642)	1	0.047 (0.100)	Time
(0.4, 0.6)	1	0.047 (0.099)	1	0.047 (0.100)	2	0.677 (0.642)	1	0.047 (0.100)	Time
(0.5, 0.5)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.677 (0.642)	1	0.047 (0.100)	Time
(0.6, 0.4)	1	0.047 (0.099)	1	0.047 (0.099)	2	0.679 (0.642)	1	0.047 (0.100)	Time
(0.7, 0.3)	1	0.047 (0.100)	1	0.047 (0.100)	2	0.679 (0.642)	1	0.047 (0.106)	Time
(0.8, 0.2)	1	0.053 (0.112)	1	0.047 (0.113)	2	0.680 (0.642)	1	0.050 (0.113)	Time
(0.9, 0.1)	1	0.052 (0.112)	1	0.050 (0.113)	2	0.679 (0.643)	1	0.052 (0.112)	Time

Table 13. SOGA on wc-c5-5D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.2, 0.8)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.3, 0.7)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.4, 0.6)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.5, 0.5)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.6, 0.4)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.7, 0.3)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.8, 0.2)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.9, 0.1)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.2, 0.8)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.3, 0.7)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.4, 0.6)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.5, 0.5)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.6, 0.4)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.7, 0.3)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.8, 0.2)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.9, 0.1)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time





Table 16. SA on wc-c5-5D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.2, 0.8)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.3, 0.7)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.4, 0.6)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.5, 0.5)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.6, 0.4)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.7, 0.3)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.8, 0.2)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.9, 0.1)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.2, 0.8)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.3, 0.7)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.4, 0.6)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.5, 0.5)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.6, 0.4)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.7, 0.3)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.8, 0.2)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time
(0.9, 0.1)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Time

Table 17. SOGA on rs-c3-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.856 (0.052)	2	0.856 (0.052)	1	0.000 (0.000)	3	0.988 (0.107)	Eval.
(0.2, 0.8)	2	0.855 (0.135)	2	0.865 (0.087)	1	0.127 (0.127)	2	0.886 (0.194)	Eval.
(0.3, 0.7)	2	0.842 (0.133)	2	0.882 (0.149)	1	0.140 (0.279)	2	0.888 (0.172)	Eval.
(0.4, 0.6)	2	0.822 (0.292)	2	0.833 (0.305)	1	0.166 (0.332)	2	0.833 (0.315)	Eval.
(0.5, 0.5)	2	0.774 (0.351)	1	0.783 (0.428)	2	0.174 (0.348)	1	0.783 (0.374)	Eval.
(0.6, 0.4)	1	0.745 (0.427)	1	0.745 (0.475)	2	0.371 (0.559)	1	0.766 (0.482)	Eval.
(0.7, 0.3)	1	0.714 (0.596)	1	0.723 (0.603)	2	0.397 (0.794)	1	0.724 (0.603)	Eval.
(0.8, 0.2)	1	0.501 (0.964)	1	0.501 (0.921)	2	0.498 (1.000)	1	0.573 (0.837)	Eval.
(0.9, 0.1)	1	0.459 (0.984)	1	0.468 (0.942)	2	0.521 (0.958)	1	0.468 (0.984)	Eval.
(0.1, 0.9)	2	0.559 (0.745)	2	0.559 (0.803)	1	0.557 (0.932)	3	0.613 (0.814)	Time
(0.2, 0.8)	2	0.572 (0.742)	2	0.633 (0.821)	1	0.348 (0.869)	2	0.634 (0.826)	Time
(0.3, 0.7)	2	0.745 (0.739)	2	0.745 (0.764)	1	0.371 (0.932)	2	0.766 (0.693)	Time
(0.4, 0.6)	2	0.753 (0.720)	2	0.753 (0.690)	1	0.377 (0.753)	2	0.753 (0.645)	Time
(0.5, 0.5)	2	0.714 (0.666)	1	0.723 (0.620)	2	0.397 (0.794)	1	0.724 (0.603)	Time
(0.6, 0.4)	1	0.658 (0.671)	1	0.658 (0.623)	2	0.400 (0.800)	1	0.720 (0.623)	Time
(0.7, 0.3)	1	0.501 (0.964)	1	0.501 (0.921)	2	0.498 (1.000)	1	0.573 (0.837)	Time
(0.8, 0.2)	1	0.500 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	1	0.500 (0.983)	Time
(0.9, 0.1)	1	0.459 (0.984)	1	0.468 (0.942)	2	0.521 (0.958)	1	0.468 (0.984)	Time

Table 18. HC on rs-c3-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.600 (0.800)	3	0.600 (0.800)	1	0.600 (1.000)	3	0.600 (0.800)	Eval.
(0.2, 0.8)	2	0.565 (0.753)	2	0.565 (0.769)	1	0.563 (0.941)	2	0.619 (0.812)	Eval.
(0.3, 0.7)	2	0.653 (0.794)	2	0.653 (0.801)	1	0.397 (0.993)	2	0.714 (0.801)	Eval.
(0.4, 0.6)	2	0.658 (0.794)	2	0.720 (0.794)	1	0.400 (1.000)	2	0.720 (0.800)	Eval.
(0.5, 0.5)	1	0.657 (0.792)	1	0.657 (0.792)	1	0.400 (1.000)	1	0.682 (0.796)	Eval.
(0.6, 0.4)	1	0.501 (0.980)	1	0.544 (0.965)	2	0.499 (1.000)	1	0.573 (0.837)	Eval.
(0.7, 0.3)	1	0.500 (0.975)	1	0.500 (0.992)	2	0.500 (1.000)	1	0.500 (0.992)	Eval.
(0.8, 0.2)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (0.983)	Eval.
(0.9, 0.1)	1	0.459 (0.984)	1	0.468 (0.942)	2	0.521 (0.958)	1	0.468 (0.984)	Eval.
(0.1, 0.9)	2	0.446 (0.981)	3	0.501 (0.998)	1	0.501 (1.000)	3	0.501 (0.998)	Time
(0.2, 0.8)	2	0.600 (0.800)	2	0.600 (0.800)	1	0.600 (1.000)	2	0.600 (0.800)	Time
(0.3, 0.7)	2	0.600 (0.801)	2	0.600 (0.801)	1	0.598 (1.000)	2	0.658 (0.801)	Time
(0.4, 0.6)	2	0.657 (0.803)	2	0.657 (0.803)	1	0.405 (1.000)	2	0.657 (0.803)	Time
(0.5, 0.5)	1	0.501 (0.990)	1	0.544 (0.990)	1	0.499 (1.000)	1	0.573 (0.998)	Time
(0.6, 0.4)	1	0.500 (0.975)	1	0.500 (0.992)	2	0.500 (1.000)	1	0.500 (0.992)	Time
(0.7, 0.3)	1	0.500 (0.975)	1	0.500 (0.992)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.8, 0.2)	1	0.444 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (0.983)	Time
(0.9, 0.1)	1	0.459 (0.984)	1	0.468 (0.942)	2	0.521 (0.958)	1	0.475 (0.984)	Time

Table 19. RS on rs-c3-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.445 (0.983)	2	0.490 (1.000)	1	0.500 (1.000)	3	0.500 (1.000)	Eval.
(0.2, 0.8)	2	0.599 (0.803)	2	0.599 (0.803)	1	0.599 (1.000)	2	0.599 (0.803)	Eval.
(0.3, 0.7)	2	0.599 (0.803)	2	0.599 (0.803)	1	0.599 (1.000)	2	0.599 (0.803)	Eval.
(0.4, 0.6)	2	0.501 (0.998)	2	0.501 (0.998)	1	0.499 (1.000)	2	0.573 (0.998)	Eval.
(0.5, 0.5)	1	0.500 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	1	0.544 (1.000)	Eval.
(0.6, 0.4)	1	0.500 (0.975)	1	0.500 (0.992)	2	0.500 (1.000)	1	0.500 (1.000)	Eval.
(0.7, 0.3)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Eval.
(0.8, 0.2)	1	0.444 (0.983)	1	0.490 (0.983)	2	0.500 (1.000)	1	0.500 (0.983)	Eval.
(0.9, 0.1)	1	0.459 (0.984)	1	0.468 (0.942)	2	0.521 (0.958)	1	0.475 (0.984)	Eval.
(0.1, 0.9)	2	0.444 (0.983)	2	0.482 (1.000)	1	0.500 (1.000)	3	0.500 (1.000)	Time
(0.2, 0.8)	2	0.599 (0.789)	2	0.599 (0.803)	1	0.599 (1.000)	2	0.599 (0.803)	Time
(0.3, 0.7)	2	0.501 (0.981)	2	0.501 (0.998)	1	0.501 (1.000)	2	0.501 (0.998)	Time
(0.4, 0.6)	2	0.501 (0.982)	2	0.501 (0.999)	1	0.501 (1.000)	2	0.544 (0.999)	Time
(0.5, 0.5)	1	0.500 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.6, 0.4)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.7, 0.3)	1	0.490 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.8, 0.2)	1	0.444 (0.983)	1	0.452 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.9, 0.1)	1	0.459 (0.982)	1	0.467 (0.940)	2	0.520 (0.958)	1	0.474 (0.982)	Time

Table 20. SA on rs-c3-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.444 (0.983)	2	0.452 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	Eval.
(0.2, 0.8)	2	0.491 (0.981)	2	0.501 (0.998)	1	0.501 (1.000)	2	0.501 (0.998)	Eval.
(0.3, 0.7)	2	0.501 (0.982)	2	0.501 (0.999)	1	0.501 (1.000)	2	0.501 (0.999)	Eval.
(0.4, 0.6)	2	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	2	0.500 (1.000)	Eval.
(0.5, 0.5)	1	0.500 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	2	0.500 (1.000)	Eval.
(0.6, 0.4)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Eval.
(0.7, 0.3)	1	0.482 (0.983)	1	0.500 (0.983)	3	0.500 (1.000)	2	0.500 (1.000)	Eval.
(0.8, 0.2)	1	0.444 (0.983)	1	0.449 (0.983)	3	0.500 (1.000)	2	0.492 (0.983)	Eval.
(0.9, 0.1)	1	0.459 (0.982)	1	0.467 (0.940)	3	0.520 (0.958)	2	0.504 (0.940)	Eval.
(0.1, 0.9)	2	0.444 (0.983)	2	0.444 (0.983)	1	0.500 (1.000)	2	0.500 (1.000)	Time
(0.2, 0.8)	2	0.445 (0.982)	2	0.501 (0.999)	1	0.501 (1.000)	2	0.501 (0.999)	Time
(0.3, 0.7)	2	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	2	0.500 (1.000)	Time
(0.4, 0.6)	2	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	2	0.500 (1.000)	Time
(0.5, 0.5)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	2	0.500 (1.000)	Time
(0.6, 0.4)	1	0.500 (0.983)	1	0.500 (0.983)	2	0.500 (1.000)	1	0.500 (1.000)	Time
(0.7, 0.3)	1	0.444 (0.983)	1	0.490 (0.983)	3	0.500 (1.000)	2	0.500 (0.983)	Time
(0.8, 0.2)	1	0.444 (0.983)	1	0.444 (0.983)	3	0.500 (1.000)	2	0.492 (0.983)	Time
(0.9, 0.1)	1	0.435 (0.981)	1	0.444 (0.981)	3	0.499 (1.000)	2	0.483 (0.981)	Time

Table 21. SOGA on wc-c1-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	1.000 (0.000)	2	1.000 (0.000)	1	0.035 (0.000)	1	0.000 (1.000)	Eval.
(0.2, 0.8)	2	0.861 (0.243)	2	0.861 (0.243)	1	0.133 (0.104)	2	0.757 (0.861)	Eval.
(0.3, 0.7)	2	0.752 (0.342)	2	0.752 (0.342)	1	0.094 (0.188)	2	0.658 (0.213)	Eval.
(0.4, 0.6)	1	0.840 (0.358)	1	0.840 (0.400)	1	0.119 (0.238)	1	0.720 (0.478)	Eval.
(0.5, 0.5)	2	0.793 (0.374)	2	0.793 (0.374)	1	0.125 (0.250)	2	0.751 (0.409)	Eval.
(0.6, 0.4)	1	0.751 (0.335)	1	0.751 (0.499)	1	0.248 (0.376)	1	0.626 (0.501)	Eval.
(0.7, 0.3)	1	0.714 (0.568)	1	0.857 (0.568)	2	0.286 (0.571)	1	0.704 (0.476)	Eval.
(0.8, 0.2)	1	0.668 (0.722)	1	0.668 (0.665)	2	0.331 (0.662)	1	0.501 (0.825)	Eval.
(0.9, 0.1)	1	0.613 (0.939)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.337 (0.833)	Eval.
(0.1, 0.9)	2	0.704 (0.805)	2	0.714 (0.714)	1	0.425 (0.714)	1	0.432 (0.905)	Time
(0.2, 0.8)	2	0.714 (0.714)	2	0.857 (0.714)	1	0.286 (0.714)	2	0.571 (0.849)	Time
(0.3, 0.7)	2	0.714 (0.714)	2	0.714 (0.571)	1	0.283 (0.709)	2	0.668 (0.762)	Time
(0.4, 0.6)	1	0.680 (0.544)	1	0.680 (0.592)	1	0.272 (0.544)	1	0.636 (0.816)	Time
(0.5, 0.5)	2	0.714 (0.571)	2	0.714 (0.571)	1	0.286 (0.571)	2	0.668 (0.709)	Time
(0.6, 0.4)	1	0.714 (0.571)	1	0.714 (0.571)	1	0.286 (0.571)	1	0.668 (0.709)	Time
(0.7, 0.3)	1	0.668 (0.722)	1	0.668 (0.665)	2	0.331 (0.662)	1	0.501 (0.825)	Time
(0.8, 0.2)	1	0.613 (0.833)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.500 (0.828)	Time
(0.9, 0.1)	1	0.613 (0.939)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.337 (0.833)	Time

Table 22. HC on wc-c1-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.668 (0.805)	2	0.668 (0.714)	1	0.429 (0.714)	1	0.432 (0.849)	Eval.
(0.2, 0.8)	2	0.714 (0.714)	2	0.714 (0.714)	1	0.425 (0.714)	2	0.571 (0.762)	Eval.
(0.3, 0.7)	2	0.714 (0.714)	2	0.714 (0.714)	1	0.286 (0.714)	2	0.571 (0.762)	Eval.
(0.4, 0.6)	2	0.714 (0.714)	2	0.714 (0.714)	1	0.286 (0.714)	1	0.668 (0.762)	Eval.
(0.5, 0.5)	2	0.714 (0.714)	2	0.714 (0.621)	1	0.286 (0.714)	2	0.668 (0.762)	Eval.
(0.6, 0.4)	1	0.668 (0.831)	1	0.668 (0.722)	1	0.331 (0.662)	1	0.614 (0.825)	Eval.
(0.7, 0.3)	1	0.655 (0.832)	1	0.655 (0.832)	2	0.335 (0.667)	1	0.501 (0.826)	Eval.
(0.8, 0.2)	1	0.613 (0.833)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.500 (0.889)	Eval.
(0.9, 0.1)	1	0.613 (0.939)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.500 (0.889)	Eval.
(0.1, 0.9)	2	0.614 (0.937)	2	0.614 (0.831)	1	0.335 (0.668)	1	0.501 (0.886)	Time
(0.2, 0.8)	2	0.704 (0.714)	2	0.704 (0.714)	1	0.429 (0.714)	2	0.571 (0.762)	Time
(0.3, 0.7)	2	0.714 (0.714)	2	0.714 (0.714)	1	0.425 (0.714)	2	0.571 (0.762)	Time
(0.4, 0.6)	2	0.714 (0.714)	2	0.714 (0.714)	1	0.286 (0.714)	1	0.571 (0.762)	Time
(0.5, 0.5)	2	0.668 (0.831)	2	0.668 (0.831)	1	0.331 (0.668)	2	0.501 (0.886)	Time
(0.6, 0.4)	1	0.668 (0.831)	1	0.668 (0.831)	1	0.332 (0.668)	1	0.501 (0.825)	Time
(0.7, 0.3)	1	0.655 (0.832)	1	0.655 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Time
(0.8, 0.2)	1	0.613 (0.833)	1	0.613 (0.833)	2	0.334 (0.667)	1	0.500 (0.888)	Time
(0.9, 0.1)	1	0.613 (0.939)	1	0.613 (0.833)	2	0.333 (0.667)	1	0.500 (0.889)	Time

Table 23. RS on wc-c1-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.614 (0.937)	2	0.614 (0.831)	1	0.335 (0.668)	1	0.501 (0.886)	Eval.
(0.2, 0.8)	3	0.704 (0.714)	3	0.704 (0.714)	1	0.429 (0.714)	2	0.571 (0.762)	Eval.
(0.3, 0.7)	2	0.714 (0.715)	2	0.714 (0.715)	1	0.426 (0.714)	2	0.571 (0.762)	Eval.
(0.4, 0.6)	2	0.647 (0.837)	2	0.647 (0.805)	1	0.320 (0.647)	2	0.486 (0.859)	Eval.
(0.5, 0.5)	2	0.668 (0.831)	2	0.668 (0.831)	1	0.331 (0.668)	2	0.501 (0.886)	Eval.
(0.6, 0.4)	1	0.668 (0.831)	1	0.668 (0.831)	1	0.332 (0.668)	1	0.501 (0.886)	Eval.
(0.7, 0.3)	1	0.655 (0.832)	1	0.655 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Eval.
(0.8, 0.2)	1	0.621 (0.832)	1	0.639 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Eval.
(0.9, 0.1)	1	0.613 (0.920)	1	0.613 (0.833)	2	0.334 (0.667)	1	0.500 (0.888)	Eval.
(0.1, 0.9)	2	0.621 (0.831)	2	0.640 (0.831)	1	0.335 (0.668)	1	0.501 (0.886)	Time
(0.2, 0.8)	3	0.703 (0.715)	3	0.703 (0.715)	1	0.428 (0.714)	2	0.571 (0.762)	Time
(0.3, 0.7)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.859)	Time
(0.4, 0.6)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.320 (0.647)	2	0.486 (0.859)	Time
(0.5, 0.5)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.859)	Time
(0.6, 0.4)	1	0.647 (0.837)	1	0.647 (0.837)	1	0.322 (0.647)	1	0.486 (0.859)	Time
(0.7, 0.3)	1	0.634 (0.837)	1	0.634 (0.837)	2	0.324 (0.646)	1	0.485 (0.859)	Time
(0.8, 0.2)	1	0.639 (0.832)	1	0.655 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Time
(0.9, 0.1)	1	0.613 (0.901)	1	0.621 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Time

Table 24. SA on wc-c1-6D for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.640 (0.831)	3	0.655 (0.831)	1	0.335 (0.668)	1	0.501 (0.886)	Eval.
(0.2, 0.8)	2	0.635 (0.837)	2	0.635 (0.837)	1	0.324 (0.647)	2	0.486 (0.859)	Eval.
(0.3, 0.7)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.859)	Eval.
(0.4, 0.6)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.859)	Eval.
(0.5, 0.5)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.859)	Eval.
(0.6, 0.4)	1	0.646 (0.837)	2	0.646 (0.837)	1	0.324 (0.646)	2	0.485 (0.859)	Eval.
(0.7, 0.3)	1	0.634 (0.837)	1	0.634 (0.837)	1	0.324 (0.646)	1	0.485 (0.859)	Eval.
(0.8, 0.2)	1	0.619 (0.837)	1	0.634 (0.825)	2	0.324 (0.646)	1	0.485 (0.859)	Eval.
(0.9, 0.1)	1	0.613 (0.832)	1	0.634 (0.832)	2	0.334 (0.667)	1	0.501 (0.887)	Eval.
(0.1, 0.9)	2	0.619 (0.806)	3	0.634 (0.837)	1	0.324 (0.646)	1	0.485 (0.859)	Time
(0.2, 0.8)	2	0.635 (0.837)	2	0.635 (0.837)	1	0.324 (0.647)	2	0.486 (0.859)	Time
(0.3, 0.7)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.324 (0.647)	2	0.486 (0.859)	Time
(0.4, 0.6)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.871)	Time
(0.5, 0.5)	2	0.647 (0.837)	2	0.647 (0.837)	1	0.322 (0.647)	2	0.486 (0.871)	Time
(0.6, 0.4)	1	0.634 (0.837)	2	0.634 (0.837)	1	0.324 (0.646)	2	0.492 (0.872)	Time
(0.7, 0.3)	1	0.634 (0.837)	1	0.634 (0.837)	1	0.324 (0.646)	1	0.485 (0.857)	Time
(0.8, 0.2)	1	0.625 (0.837)	1	0.634 (0.837)	2	0.324 (0.646)	1	0.485 (0.808)	Time
(0.9, 0.1)	1	0.615 (0.837)	1	0.615 (0.806)	2	0.324 (0.646)	1	0.485 (0.859)	Time

Table 25. SOGA on LLVM for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	Eval.
(0.2, 0.8)	1	0.688 (0.688)	2	0.688 (1.000)	2	1.000 (1.000)	1	0.688 (0.011)	Eval.
(0.3, 0.7)	1	0.344 (0.349)	1	0.349 (0.360)	2	0.500 (1.000)	1	0.344 (0.011)	Eval.
(0.4, 0.6)	1	0.005 (0.009)	1	0.005 (0.014)	3	0.567 (0.865)	2	0.005 (0.090)	Eval.
(0.5, 0.5)	1	0.006 (0.014)	1	0.009 (0.014)	2	0.567 (0.865)	1	0.005 (0.055)	Eval.
(0.6, 0.4)	1	0.007 (0.013)	1	0.010 (0.010)	3	0.698 (0.906)	2	0.014 (0.063)	Eval.
(0.7, 0.3)	1	0.011 (0.017)	1	0.013 (0.018)	3	0.540 (0.920)	2	0.037 (0.192)	Eval.
(0.8, 0.2)	1	0.009 (0.013)	1	0.009 (0.015)	3	0.628 (0.747)	2	0.031 (0.052)	Eval.
(0.9, 0.1)	1	0.021 (0.027)	1	0.023 (0.027)	2	0.632 (0.737)	1	0.024 (0.038)	Eval.
(0.1, 0.9)	1	0.115 (0.120)	1	0.115 (0.120)	1	0.667 (0.833)	2	0.117 (0.037)	Time
(0.2, 0.8)	1	0.115 (0.113)	2	0.115 (0.120)	2	0.500 (0.833)	1	0.117 (0.035)	Time
(0.3, 0.7)	1	0.021 (0.027)	1	0.023 (0.027)	2	0.449 (0.921)	1	0.023 (0.039)	Time
(0.4, 0.6)	1	0.029 (0.033)	1	0.029 (0.034)	3	0.548 (0.903)	2	0.029 (0.047)	Time
(0.5, 0.5)	1	0.029 (0.034)	1	0.029 (0.034)	2	0.548 (0.903)	1	0.030 (0.047)	Time
(0.6, 0.4)	1	0.029 (0.034)	1	0.031 (0.036)	3	0.548 (0.903)	2	0.033 (0.047)	Time
(0.7, 0.3)	1	0.009 (0.013)	1	0.009 (0.015)	3	0.628 (0.747)	2	0.031 (0.054)	Time
(0.8, 0.2)	1	0.023 (0.027)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.030 (0.042)	Time
(0.9, 0.1)	1	0.021 (0.027)	1	0.023 (0.027)	2	0.632 (0.737)	1	0.024 (0.038)	Time

Table 26. HC on LLVM for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.108 (0.025)	1	0.108 (0.114)	1	0.664 (0.839)	2	0.111 (0.035)	Eval.
(0.2, 0.8)	1	0.021 (0.027)	2	0.023 (0.027)	2	0.632 (0.921)	1	0.024 (0.038)	Eval.
(0.3, 0.7)	1	0.021 (0.027)	1	0.023 (0.027)	2	0.447 (0.921)	1	0.024 (0.038)	Eval.
(0.4, 0.6)	2	0.023 (0.027)	1	0.023 (0.029)	3	0.447 (0.921)	2	0.024 (0.038)	Eval.
(0.5, 0.5)	1	0.023 (0.027)	1	0.023 (0.029)	2	0.447 (0.921)	1	0.024 (0.038)	Eval.
(0.6, 0.4)	2	0.023 (0.014)	1	0.024 (0.029)	3	0.633 (0.736)	2	0.025 (0.039)	Eval.
(0.7, 0.3)	2	0.023 (0.014)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.030 (0.042)	Eval.
(0.8, 0.2)	2	0.024 (0.014)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.029 (0.042)	Eval.
(0.9, 0.1)	1	0.023 (0.029)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.024 (0.038)	Eval.
(0.1, 0.9)	2	0.023 (0.014)	1	0.023 (0.029)	1	0.632 (0.737)	2	0.024 (0.038)	Time
(0.2, 0.8)	1	0.023 (0.014)	2	0.023 (0.029)	2	0.632 (0.921)	1	0.024 (0.038)	Time
(0.3, 0.7)	1	0.023 (0.014)	1	0.023 (0.029)	2	0.632 (0.921)	1	0.024 (0.038)	Time
(0.4, 0.6)	2	0.023 (0.014)	1	0.023 (0.029)	3	0.447 (0.849)	2	0.024 (0.038)	Time
(0.5, 0.5)	1	0.023 (0.015)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.024 (0.038)	Time
(0.6, 0.4)	2	0.024 (0.016)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.025 (0.038)	Time
(0.7, 0.3)	2	0.024 (0.021)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.029 (0.042)	Time
(0.8, 0.2)	2	0.024 (0.021)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.027 (0.042)	Time
(0.9, 0.1)	1	0.024 (0.019)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.025 (0.038)	Time

Table 27. RS on LLVM for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.024 (0.019)	1	0.023 (0.029)	1	0.632 (0.737)	2	0.024 (0.038)	Eval.
(0.2, 0.8)	1	0.024 (0.016)	1	0.023 (0.029)	2	0.632 (0.872)	1	0.024 (0.038)	Eval.
(0.3, 0.7)	1	0.024 (0.019)	1	0.023 (0.029)	2	0.632 (0.849)	1	0.024 (0.038)	Eval.
(0.4, 0.6)	2	0.024 (0.017)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.025 (0.038)	Eval.
(0.5, 0.5)	1	0.024 (0.025)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.025 (0.038)	Eval.
(0.6, 0.4)	2	0.024 (0.025)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.027 (0.038)	Eval.
(0.7, 0.3)	2	0.025 (0.025)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.029 (0.053)	Eval.
(0.8, 0.2)	2	0.025 (0.025)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.030 (0.053)	Eval.
(0.9, 0.1)	1	0.024 (0.025)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.029 (0.053)	Eval.
(0.1, 0.9)	2	0.024 (0.025)	1	0.023 (0.029)	1	0.632 (0.737)	2	0.027 (0.042)	Time
(0.2, 0.8)	1	0.024 (0.025)	1	0.023 (0.029)	2	0.632 (0.849)	1	0.025 (0.042)	Time
(0.3, 0.7)	1	0.024 (0.025)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.027 (0.042)	Time
(0.4, 0.6)	2	0.024 (0.025)	1	0.023 (0.029)	3	0.632 (0.737)	2	0.027 (0.042)	Time
(0.5, 0.5)	1	0.025 (0.025)	1	0.024 (0.029)	2	0.632 (0.737)	1	0.029 (0.042)	Time
(0.6, 0.4)	2	0.025 (0.025)	1	0.025 (0.029)	3	0.632 (0.737)	2	0.029 (0.043)	Time
(0.7, 0.3)	2	0.025 (0.034)	1	0.025 (0.029)	3	0.632 (0.737)	2	0.030 (0.053)	Time
(0.8, 0.2)	2	0.025 (0.034)	1	0.025 (0.030)	3	0.632 (0.737)	2	0.030 (0.053)	Time
(0.9, 0.1)	1	0.025 (0.035)	1	0.024 (0.029)	2	0.632 (0.737)	1	0.030 (0.053)	Time

Table 28. SA on LLVM for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.025 (0.030)	1	0.023 (0.029)	1	0.632 (0.737)	2	0.029 (0.053)	Eval.
(0.2, 0.8)	1	0.025 (0.030)	1	0.023 (0.029)	2	0.632 (0.737)	1	0.027 (0.046)	Eval.
(0.3, 0.7)	1	0.025 (0.029)	1	0.024 (0.030)	2	0.632 (0.737)	1	0.027 (0.046)	Eval.
(0.4, 0.6)	2	0.025 (0.034)	1	0.024 (0.030)	3	0.632 (0.737)	2	0.027 (0.043)	Eval.
(0.5, 0.5)	1	0.025 (0.034)	1	0.025 (0.030)	2	0.632 (0.737)	1	0.029 (0.042)	Eval.
(0.6, 0.4)	2	0.025 (0.035)	1	0.025 (0.031)	3	0.632 (0.737)	2	0.030 (0.053)	Eval.
(0.7, 0.3)	3	0.027 (0.038)	1	0.025 (0.031)	4	0.632 (0.737)	2	0.030 (0.053)	Eval.
(0.8, 0.2)	2	0.027 (0.038)	1	0.025 (0.031)	3	0.632 (0.737)	1	0.030 (0.053)	Eval.
(0.9, 0.1)	2	0.024 (0.037)	2	0.024 (0.029)	3	0.599 (0.751)	1	0.027 (0.051)	Eval.
(0.1, 0.9)	2	0.025 (0.039)	1	0.024 (0.031)	1	0.632 (0.737)	2	0.027 (0.053)	Time
(0.2, 0.8)	1	0.025 (0.039)	1	0.024 (0.031)	2	0.632 (0.737)	1	0.027 (0.046)	Time
(0.3, 0.7)	1	0.025 (0.039)	1	0.025 (0.031)	2	0.632 (0.737)	1	0.025 (0.043)	Time
(0.4, 0.6)	2	0.025 (0.039)	1	0.025 (0.031)	3	0.632 (0.737)	2	0.027 (0.042)	Time
(0.5, 0.5)	1	0.027 (0.038)	1	0.025 (0.031)	2	0.632 (0.737)	1	0.029 (0.042)	Time
(0.6, 0.4)	2	0.027 (0.038)	1	0.025 (0.031)	3	0.632 (0.737)	2	0.029 (0.046)	Time
(0.7, 0.3)	3	0.027 (0.038)	1	0.025 (0.031)	4	0.632 (0.737)	2	0.030 (0.053)	Time
(0.8, 0.2)	2	0.027 (0.038)	1	0.025 (0.031)	3	0.632 (0.737)	1	0.029 (0.053)	Time
(0.9, 0.1)	2	0.026 (0.036)	2	0.024 (0.030)	3	0.599 (0.751)	1	0.027 (0.051)	Time

Table 29. SOGA on TRIMESH for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.005 (0.003)	2	0.998 (0.002)	1	0.001 (0.004)	1	0.004 (0.004)	Eval.
(0.2, 0.8)	2	0.124 (0.871)	2	1.000 (0.124)	1	0.124 (0.132)	1	0.124 (0.124)	Eval.
(0.3, 0.7)	2	0.749 (0.773)	3	0.876 (0.230)	1	0.130 (0.247)	1	0.124 (0.246)	Eval.
(0.4, 0.6)	2	0.590 (0.736)	2	0.857 (0.286)	1	0.143 (0.286)	1	0.142 (0.284)	Eval.
(0.5, 0.5)	1	0.508 (0.800)	1	0.835 (0.351)	1	0.171 (0.334)	1	0.164 (0.324)	Eval.
(0.6, 0.4)	1	0.516 (0.502)	1	0.831 (0.484)	2	0.330 (0.497)	2	0.328 (0.496)	Eval.
(0.7, 0.3)	1	0.349 (0.518)	1	0.688 (0.653)	2	0.339 (0.652)	2	0.331 (0.659)	Eval.
(0.8, 0.2)	1	0.343 (0.686)	1	0.664 (0.672)	3	0.496 (0.670)	2	0.492 (0.662)	Eval.
(0.9, 0.1)	1	0.386 (0.774)	1	0.603 (0.805)	2	0.589 (0.779)	1	0.388 (0.771)	Eval.
(0.1, 0.9)	1	0.292 (0.587)	2	0.712 (0.708)	1	0.569 (0.711)	1	0.423 (0.706)	Time
(0.2, 0.8)	2	0.285 (0.700)	2	0.714 (0.715)	1	0.422 (0.691)	1	0.277 (0.690)	Time
(0.3, 0.7)	2	0.332 (0.832)	3	0.832 (0.667)	1	0.333 (0.819)	1	0.169 (0.659)	Time
(0.4, 0.6)	2	0.348 (0.688)	2	0.689 (0.666)	1	0.333 (0.658)	1	0.169 (0.498)	Time
(0.5, 0.5)	1	0.349 (0.686)	1	0.689 (0.652)	1	0.342 (0.655)	1	0.332 (0.499)	Time
(0.6, 0.4)	1	0.349 (0.681)	1	0.668 (0.652)	2	0.344 (0.655)	2	0.331 (0.660)	Time
(0.7, 0.3)	1	0.346 (0.683)	1	0.665 (0.669)	2	0.498 (0.667)	2	0.331 (0.659)	Time
(0.8, 0.2)	1	0.386 (0.771)	1	0.602 (0.797)	3	0.579 (0.782)	2	0.385 (0.769)	Time
(0.9, 0.1)	1	0.386 (0.774)	1	0.603 (0.805)	2	0.589 (0.779)	1	0.388 (0.771)	Time

Table 30. HC on TRIMESH for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.329 (0.802)	2	0.663 (0.682)	1	0.646 (0.806)	1	0.479 (0.806)	Eval.
(0.2, 0.8)	1	0.178 (0.523)	2	0.519 (0.832)	1	0.500 (0.820)	1	0.332 (0.661)	Eval.
(0.3, 0.7)	1	0.177 (0.519)	2	0.520 (0.822)	1	0.344 (0.819)	1	0.170 (0.661)	Eval.
(0.4, 0.6)	1	0.178 (0.519)	2	0.667 (0.822)	1	0.346 (0.812)	1	0.331 (0.661)	Eval.
(0.5, 0.5)	1	0.178 (0.517)	1	0.667 (0.822)	1	0.351 (0.806)	1	0.331 (0.660)	Eval.
(0.6, 0.4)	2	0.328 (0.521)	1	0.593 (0.825)	2	0.497 (0.667)	2	0.331 (0.659)	Eval.
(0.7, 0.3)	2	0.332 (0.664)	1	0.545 (0.824)	2	0.500 (0.673)	2	0.332 (0.664)	Eval.
(0.8, 0.2)	2	0.379 (0.755)	1	0.591 (0.801)	3	0.576 (0.768)	2	0.378 (0.756)	Eval.
(0.9, 0.1)	1	0.384 (0.768)	1	0.598 (0.809)	2	0.588 (0.773)	1	0.384 (0.766)	Eval.
(0.1, 0.9)	1	0.383 (0.770)	2	0.599 (0.807)	1	0.586 (0.775)	1	0.386 (0.767)	Time
(0.2, 0.8)	1	0.179 (0.664)	2	0.520 (0.833)	1	0.500 (0.814)	1	0.332 (0.663)	Time
(0.3, 0.7)	1	0.178 (0.662)	2	0.524 (0.832)	1	0.499 (0.810)	1	0.331 (0.661)	Time
(0.4, 0.6)	1	0.178 (0.658)	2	0.583 (0.823)	1	0.357 (0.797)	1	0.331 (0.660)	Time
(0.5, 0.5)	1	0.329 (0.523)	1	0.584 (0.825)	1	0.498 (0.673)	1	0.331 (0.659)	Time
(0.6, 0.4)	2	0.331 (0.659)	1	0.570 (0.825)	2	0.498 (0.671)	2	0.331 (0.659)	Time
(0.7, 0.3)	2	0.332 (0.665)	1	0.545 (0.824)	2	0.507 (0.675)	2	0.332 (0.664)	Time
(0.8, 0.2)	2	0.360 (0.718)	1	0.564 (0.811)	3	0.547 (0.728)	2	0.358 (0.717)	Time
(0.9, 0.1)	1	0.378 (0.760)	1	0.591 (0.813)	2	0.579 (0.762)	1	0.378 (0.756)	Time

Table 31. RS on TRIMESH for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.382 (0.763)	2	0.595 (0.853)	1	0.582 (0.770)	1	0.383 (0.760)	Eval.
(0.2, 0.8)	1	0.331 (0.665)	2	0.519 (0.843)	1	0.507 (0.800)	1	0.333 (0.663)	Eval.
(0.3, 0.7)	1	0.178 (0.663)	2	0.524 (0.834)	1	0.500 (0.779)	1	0.331 (0.663)	Eval.
(0.4, 0.6)	1	0.328 (0.661)	2	0.563 (0.836)	1	0.497 (0.673)	1	0.329 (0.661)	Eval.
(0.5, 0.5)	1	0.329 (0.658)	2	0.566 (0.826)	1	0.497 (0.672)	1	0.331 (0.658)	Eval.
(0.6, 0.4)	2	0.331 (0.662)	1	0.568 (0.825)	2	0.503 (0.673)	2	0.331 (0.662)	Eval.
(0.7, 0.3)	2	0.332 (0.663)	1	0.562 (0.825)	2	0.505 (0.673)	2	0.331 (0.662)	Eval.
(0.8, 0.2)	2	0.333 (0.664)	1	0.528 (0.825)	3	0.507 (0.669)	2	0.332 (0.663)	Eval.
(0.9, 0.1)	1	0.344 (0.688)	1	0.539 (0.831)	2	0.525 (0.690)	1	0.343 (0.686)	Eval.
(0.1, 0.9)	1	0.354 (0.706)	2	0.551 (0.864)	1	0.540 (0.715)	1	0.354 (0.705)	Time
(0.2, 0.8)	1	0.332 (0.664)	2	0.523 (0.852)	1	0.506 (0.773)	1	0.333 (0.663)	Time
(0.3, 0.7)	1	0.329 (0.662)	2	0.531 (0.836)	1	0.502 (0.675)	1	0.330 (0.661)	Time
(0.4, 0.6)	1	0.324 (0.651)	2	0.555 (0.839)	1	0.490 (0.663)	1	0.326 (0.651)	Time
(0.5, 0.5)	1	0.327 (0.653)	2	0.560 (0.835)	1	0.496 (0.665)	1	0.327 (0.653)	Time
(0.6, 0.4)	2	0.331 (0.661)	1	0.567 (0.826)	2	0.504 (0.672)	2	0.331 (0.661)	Time
(0.7, 0.3)	2	0.332 (0.662)	1	0.563 (0.826)	2	0.506 (0.669)	2	0.331 (0.661)	Time
(0.8, 0.2)	2	0.333 (0.663)	1	0.535 (0.832)	3	0.508 (0.666)	2	0.332 (0.664)	Time
(0.9, 0.1)	1	0.333 (0.665)	1	0.524 (0.848)	2	0.508 (0.668)	1	0.332 (0.663)	Time



Table 32. SA on TRIMESH for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.333 (0.664)	2	0.523 (0.873)	1	0.508 (0.675)	1	0.332 (0.663)	Eval.
(0.2, 0.8)	1	0.331 (0.663)	2	0.527 (0.866)	1	0.506 (0.676)	1	0.331 (0.662)	Eval.
(0.3, 0.7)	1	0.330 (0.662)	2	0.540 (0.846)	1	0.504 (0.674)	1	0.331 (0.661)	Eval.
(0.4, 0.6)	1	0.324 (0.649)	2	0.554 (0.840)	1	0.491 (0.661)	1	0.324 (0.648)	Eval.
(0.5, 0.5)	1	0.324 (0.647)	2	0.557 (0.840)	1	0.494 (0.660)	1	0.324 (0.648)	Eval.
(0.6, 0.4)	1	0.326 (0.650)	1	0.559 (0.831)	1	0.497 (0.658)	1	0.325 (0.651)	Eval.
(0.7, 0.3)	2	0.332 (0.662)	1	0.566 (0.826)	2	0.506 (0.665)	2	0.331 (0.662)	Eval.
(0.8, 0.2)	2	0.333 (0.662)	1	0.546 (0.836)	4	0.507 (0.666)	3	0.332 (0.664)	Eval.
(0.9, 0.1)	1	0.333 (0.664)	1	0.530 (0.853)	2	0.508 (0.669)	1	0.332 (0.664)	Eval.
(0.1, 0.9)	1	0.332 (0.665)	2	0.528 (0.873)	1	0.508 (0.673)	1	0.331 (0.663)	Time
(0.2, 0.8)	1	0.331 (0.663)	2	0.533 (0.867)	1	0.506 (0.675)	1	0.331 (0.662)	Time
(0.3, 0.7)	1	0.325 (0.651)	2	0.552 (0.852)	1	0.496 (0.664)	1	0.325 (0.651)	Time
(0.4, 0.6)	1	0.323 (0.645)	2	0.553 (0.841)	1	0.492 (0.658)	1	0.323 (0.645)	Time
(0.5, 0.5)	1	0.323 (0.643)	2	0.555 (0.841)	1	0.492 (0.653)	1	0.322 (0.644)	Time
(0.6, 0.4)	1	0.324 (0.646)	1	0.558 (0.840)	1	0.495 (0.654)	1	0.323 (0.647)	Time
(0.7, 0.3)	2	0.327 (0.650)	1	0.558 (0.831)	2	0.498 (0.654)	2	0.326 (0.652)	Time
(0.8, 0.2)	2	0.330 (0.658)	1	0.559 (0.838)	4	0.503 (0.662)	3	0.330 (0.659)	Time
(0.9, 0.1)	1	0.332 (0.663)	1	0.540 (0.853)	2	0.508 (0.669)	1	0.332 (0.664)	Time

Table 33. SOGA on vp8 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.733 (0.226)	2	0.733 (0.187)	1	0.052 (0.071)	3	1.000 (0.000)	Eval.
(0.8, 0.1, 0.1)	1	0.666 (0.187)	1	0.666 (0.164)	1	0.063 (0.170)	1	0.962 (0.093)	Eval.
(0.1, 0.1, 0.8)	1	0.045 (0.015)	1	0.042 (0.013)	2	0.009 (0.216)	3	0.070 (0.934)	Eval.
(0.33, 0.33, 0.33)	1	0.038 (0.036)	1	0.038 (0.036)	3	0.014 (0.243)	2	0.092 (0.931)	Eval.
(0.1, 0.8, 0.1)	2	0.090 (0.058)	2	0.090 (0.053)	1	0.022 (0.540)	3	0.161 (0.846)	Time
(0.8, 0.1, 0.1)	1	0.100 (0.046)	1	0.100 (0.041)	1	0.021 (0.511)	1	0.166 (0.845)	Time
(0.1, 0.1, 0.8)	1	0.039 (0.024)	1	0.037 (0.020)	2	0.009 (0.236)	3	0.070 (0.933)	Time
(0.33, 0.33, 0.33)	1	0.038 (0.036)	1	0.038 (0.036)	3	0.014 (0.243)	2	0.092 (0.931)	Time

Table 34. HC on vp8 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	3	0.089 (0.082)	2	0.083 (0.059)	1	0.031 (0.539)	3	0.177 (0.847)	Eval.
(0.8, 0.1, 0.1)	1	0.101 (0.070)	1	0.088 (0.047)	1	0.031 (0.539)	1	0.177 (0.847)	Eval.
(0.1, 0.1, 0.8)	3	0.044 (0.036)	1	0.041 (0.023)	2	0.015 (0.236)	3	0.085 (0.934)	Eval.
(0.33, 0.33, 0.33)	2	0.046 (0.042)	1	0.040 (0.024)	2	0.021 (0.246)	2	0.100 (0.932)	Eval.
(0.1, 0.8, 0.1)	3	0.096 (0.089)	2	0.086 (0.054)	1	0.031 (0.503)	3	0.186 (0.860)	Time
(0.8, 0.1, 0.1)	1	0.115 (0.094)	1	0.094 (0.051)	1	0.033 (0.546)	1	0.189 (0.848)	Time
(0.1, 0.1, 0.8)	3	0.052 (0.045)	1	0.042 (0.024)	2	0.020 (0.239)	3	0.088 (0.934)	Time
(0.33, 0.33, 0.33)	2	0.059 (0.324)	1	0.041 (0.025)	2	0.018 (0.244)	2	0.102 (0.934)	Time

Table 35. RS on vp8 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	3	0.121 (0.117)	2	0.087 (0.047)	1	0.040 (0.490)	3	0.181 (0.864)	Eval.
(0.8, 0.1, 0.1)	1	0.132 (0.115)	1	0.091 (0.048)	1	0.034 (0.518)	1	0.186 (0.860)	Eval.
(0.1, 0.1, 0.8)	3	0.061 (0.357)	1	0.040 (0.023)	2	0.016 (0.236)	3	0.085 (0.937)	Eval.
(0.33, 0.33, 0.33)	2	0.062 (0.394)	1	0.039 (0.024)	3	0.018 (0.245)	2	0.106 (0.935)	Eval.
(0.1, 0.8, 0.1)	3	0.123 (0.748)	2	0.076 (0.048)	1	0.028 (0.469)	3	0.167 (0.875)	Time
(0.8, 0.1, 0.1)	1	0.132 (0.736)	1	0.082 (0.050)	1	0.031 (0.494)	1	0.174 (0.868)	Time
(0.1, 0.1, 0.8)	3	0.063 (0.385)	1	0.038 (0.027)	2	0.018 (0.238)	3	0.085 (0.937)	Time
(0.33, 0.33, 0.33)	2	0.067 (0.404)	1	0.038 (0.029)	3	0.021 (0.269)	2	0.109 (0.936)	Time

Table 36. SA on vp8 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	3	0.067 (0.397)	2	0.038 (0.028)	1	0.017 (0.253)	4	0.366 (0.936)	Eval.
(0.8, 0.1, 0.1)	1	0.082 (0.477)	1	0.046 (0.032)	1	0.018 (0.309)	2	0.445 (0.922)	Eval.
(0.1, 0.1, 0.8)	3	0.068 (0.395)	1	0.037 (0.028)	2	0.019 (0.261)	4	0.392 (0.938)	Eval.
(0.33, 0.33, 0.33)	2	0.070 (0.415)	1	0.037 (0.028)	3	0.024 (0.266)	4	0.392 (0.938)	Eval.
(0.1, 0.8, 0.1)	3	0.070 (0.391)	2	0.037 (0.028)	1	0.019 (0.262)	4	0.408 (0.938)	Time
(0.8, 0.1, 0.1)	1	0.070 (0.391)	1	0.037 (0.028)	1	0.017 (0.264)	2	0.411 (0.938)	Time
(0.1, 0.1, 0.8)	3	0.070 (0.415)	1	0.038 (0.030)	2	0.021 (0.264)	4	0.418 (0.938)	Time
(0.33, 0.33, 0.33)	2	0.070 (0.412)	1	0.036 (0.028)	3	0.026 (0.261)	4	0.408 (0.940)	Time

Table 37. SOGA on HSQLDB for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.164 (0.491)	1	0.338 (1.000)	1	0.375 (0.604)	1	0.278 (0.492)	Eval.
(0.8, 0.1, 0.1)	1	0.215 (0.514)	1	0.230 (1.000)	1	0.273 (0.894)	1	0.280 (0.792)	Eval.
(0.1, 0.1, 0.8)	1	0.215 (0.611)	1	0.280 (0.966)	1	0.313 (0.599)	1	0.324 (0.661)	Eval.
(0.33, 0.33, 0.33)	1	0.165 (0.588)	1	0.263 (0.962)	1	0.275 (0.611)	1	0.275 (0.616)	Eval.
(0.1, 0.8, 0.1)	1	0.171 (0.539)	1	0.269 (0.960)	1	0.290 (0.611)	1	0.280 (0.631)	Time
(0.8, 0.1, 0.1)	1	0.181 (0.546)	1	0.247 (0.985)	1	0.286 (0.642)	1	0.291 (0.664)	Time
(0.1, 0.1, 0.8)	1	0.169 (0.573)	1	0.254 (0.995)	1	0.275 (0.611)	1	0.280 (0.625)	Time
(0.33, 0.33, 0.33)	1	0.165 (0.588)	1	0.263 (0.962)	1	0.275 (0.611)	1	0.275 (0.616)	Time

Table 38. HC on HSQLDB for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.216 (0.635)	1	0.263 (0.962)	1	0.285 (0.611)	1	0.275 (0.645)	Eval.
(0.8, 0.1, 0.1)	1	0.216 (0.663)	1	0.256 (0.967)	1	0.276 (0.708)	1	0.266 (0.651)	Eval.
(0.1, 0.1, 0.8)	1	0.230 (0.651)	1	0.259 (0.996)	1	0.251 (0.654)	1	0.259 (0.639)	Eval.
(0.33, 0.33, 0.33)	1	0.242 (0.675)	1	0.266 (1.000)	1	0.290 (0.735)	1	0.270 (0.669)	Eval.
(0.1, 0.8, 0.1)	1	0.247 (0.726)	1	0.266 (1.000)	1	0.295 (0.750)	1	0.270 (0.668)	Time
(0.8, 0.1, 0.1)	1	0.238 (0.699)	1	0.256 (1.000)	1	0.284 (0.760)	1	0.260 (0.666)	Time
(0.1, 0.1, 0.8)	1	0.253 (0.699)	1	0.284 (1.000)	1	0.284 (0.763)	1	0.260 (0.666)	Time
(0.33, 0.33, 0.33)	1	0.270 (0.705)	1	0.270 (1.000)	1	0.317 (0.772)	1	0.270 (0.690)	Time

Table 39. RS on HSQLDB for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.278 (0.707)	1	0.278 (1.000)	1	0.315 (0.783)	1	0.300 (0.712)	Eval.
(0.8, 0.1, 0.1)	1	0.291 (0.818)	1	0.297 (1.000)	1	0.320 (0.877)	1	0.315 (0.861)	Eval.
(0.1, 0.1, 0.8)	1	0.283 (0.821)	1	0.283 (1.000)	1	0.300 (0.809)	1	0.288 (0.784)	Eval.
(0.33, 0.33, 0.33)	1	0.282 (0.793)	1	0.277 (1.000)	1	0.311 (0.793)	1	0.282 (0.773)	Eval.
(0.1, 0.8, 0.1)	1	0.271 (0.798)	1	0.278 (1.000)	1	0.312 (0.788)	1	0.276 (0.776)	Time
(0.8, 0.1, 0.1)	1	0.267 (0.756)	1	0.281 (1.000)	1	0.321 (0.770)	1	0.277 (0.762)	Time
(0.1, 0.1, 0.8)	1	0.277 (0.738)	1	0.289 (1.000)	1	0.324 (0.749)	1	0.277 (0.759)	Time
(0.33, 0.33, 0.33)	1	0.277 (0.780)	1	0.292 (1.000)	1	0.318 (0.745)	1	0.277 (0.777)	Time

Table 40. SA on HSQLDB for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.273 (0.744)	1	0.282 (1.000)	1	0.308 (0.712)	1	0.273 (0.824)	Eval.
(0.8, 0.1, 0.1)	1	0.260 (0.788)	1	0.282 (1.000)	1	0.307 (0.783)	1	0.257 (0.916)	Eval.
(0.1, 0.1, 0.8)	1	0.254 (0.787)	1	0.267 (1.000)	1	0.291 (0.757)	1	0.244 (0.955)	Eval.
(0.33, 0.33, 0.33)	1	0.231 (0.733)	1	0.244 (0.941)	1	0.261 (0.741)	1	0.218 (0.973)	Eval.
(0.1, 0.8, 0.1)	1	0.199 (0.654)	1	0.217 (0.803)	1	0.227 (0.635)	1	0.193 (0.968)	Time
(0.8, 0.1, 0.1)	1	0.176 (0.579)	1	0.196 (0.761)	1	0.204 (0.587)	1	0.174 (0.958)	Time
(0.1, 0.1, 0.8)	1	0.156 (0.538)	1	0.166 (0.703)	1	0.178 (0.562)	1	0.154 (0.971)	Time
(0.33, 0.33, 0.33)	1	0.157 (0.556)	1	0.162 (0.720)	1	0.173 (0.598)	1	0.153 (0.972)	Time

Table 41. SOGA on 5As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.2, 0.8)	2	0.143 (0.143)	2	0.143 (0.143)	3	1.000 (1.000)	1	0.016 (0.016)	Eval.
(0.3, 0.7)	2	0.143 (0.286)	2	0.143 (0.286)	3	0.857 (1.000)	1	0.016 (0.075)	Eval.
(0.4, 0.6)	2	0.274 (0.290)	2	0.274 (0.290)	3	0.855 (0.290)	1	0.043 (0.060)	Eval.
(0.5, 0.5)	2	0.321 (0.340)	2	0.321 (0.340)	2	0.830 (0.340)	1	0.051 (0.070)	Eval.
(0.6, 0.4)	3	0.490 (0.510)	3	0.490 (0.510)	2	0.830 (0.510)	1	0.051 (0.070)	Eval.
(0.7, 0.3)	3	0.493 (0.676)	3	0.493 (0.676)	2	0.662 (0.676)	1	0.041 (0.075)	Eval.
(0.8, 0.2)	3	0.661 (0.677)	3	0.661 (0.677)	2	0.661 (0.677)	1	0.038 (0.073)	Eval.
(0.9, 0.1)	3	0.661 (0.677)	3	0.661 (0.677)	1	0.492 (0.677)	2	0.003 (0.054)	Eval.
(0.1, 0.9)	1	0.667 (0.833)	1	0.667 (0.833)	1	0.500 (0.833)	1	0.019 (0.055)	Time
(0.2, 0.8)	2	0.500 (0.833)	2	0.500 (0.833)	3	0.500 (1.000)	1	0.019 (0.055)	Time
(0.3, 0.7)	2	0.492 (0.847)	2	0.492 (0.847)	3	0.661 (0.847)	1	0.003 (0.073)	Time
(0.4, 0.6)	2	0.492 (0.677)	2	0.492 (0.677)	3	0.661 (0.847)	1	0.003 (0.054)	Time
(0.5, 0.5)	2	0.492 (0.677)	2	0.492 (0.677)	2	0.661 (0.847)	1	0.038 (0.073)	Time
(0.6, 0.4)	3	0.492 (0.677)	3	0.492 (0.677)	2	0.661 (0.847)	1	0.038 (0.073)	Time
(0.7, 0.3)	3	0.661 (0.677)	3	0.661 (0.677)	2	0.661 (0.677)	1	0.038 (0.073)	Time
(0.8, 0.2)	3	0.661 (0.677)	3	0.661 (0.677)	2	0.492 (0.677)	1	0.003 (0.054)	Time
(0.9, 0.1)	3	0.661 (0.677)	3	0.661 (0.677)	1	0.492 (0.677)	2	0.003 (0.054)	Time

Table 42. HC on 5As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.661 (0.677)	1	0.661 (0.677)	1	0.492 (0.847)	1	0.003 (0.073)	Eval.
(0.2, 0.8)	2	0.661 (0.677)	2	0.661 (0.677)	3	0.661 (0.847)	1	0.037 (0.073)	Eval.
(0.3, 0.7)	1	0.530 (0.677)	2	0.576 (0.677)	3	0.661 (0.847)	1	0.038 (0.073)	Eval.
(0.4, 0.6)	1	0.421 (0.579)	1	0.421 (0.579)	2	0.566 (0.869)	1	0.033 (0.081)	Eval.
(0.5, 0.5)	2	0.421 (0.591)	2	0.421 (0.589)	3	0.566 (0.869)	1	0.033 (0.081)	Eval.
(0.6, 0.4)	2	0.420 (0.608)	2	0.420 (0.604)	3	0.565 (0.726)	1	0.031 (0.079)	Eval.
(0.7, 0.3)	2	0.436 (0.642)	2	0.436 (0.636)	2	0.587 (0.715)	1	0.046 (0.119)	Eval.
(0.8, 0.2)	2	0.471 (0.705)	2	0.471 (0.704)	2	0.634 (0.714)	1	0.049 (0.123)	Eval.
(0.9, 0.1)	1	0.491 (0.743)	1	0.491 (0.750)	1	0.660 (0.849)	1	0.051 (0.112)	Eval.
(0.1, 0.9)	1	0.420 (0.650)	1	0.420 (0.652)	2	0.565 (0.829)	1	0.044 (0.125)	Time
(0.2, 0.8)	1	0.420 (0.551)	1	0.420 (0.549)	2	0.565 (0.769)	1	0.044 (0.142)	Time
(0.3, 0.7)	1	0.420 (0.515)	1	0.419 (0.520)	1	0.578 (0.745)	1	0.044 (0.154)	Time
(0.4, 0.6)	2	0.414 (0.517)	2	0.411 (0.521)	3	0.673 (0.726)	1	0.054 (0.162)	Time
(0.5, 0.5)	2	0.406 (0.517)	2	0.405 (0.521)	3	0.710 (0.726)	1	0.061 (0.167)	Time
(0.6, 0.4)	2	0.401 (0.516)	2	0.397 (0.522)	3	0.668 (0.726)	1	0.061 (0.167)	Time
(0.7, 0.3)	2	0.399 (0.517)	2	0.392 (0.523)	2	0.619 (0.726)	1	0.060 (0.164)	Time
(0.8, 0.2)	3	0.394 (0.520)	3	0.392 (0.524)	2	0.582 (0.726)	1	0.060 (0.159)	Time
(0.9, 0.1)	3	0.392 (0.521)	3	0.392 (0.525)	2	0.564 (0.770)	1	0.060 (0.155)	Time

Table 43. RS on 5As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.387 (0.516)	1	0.386 (0.521)	1	0.582 (0.758)	1	0.060 (0.169)	Eval.
(0.2, 0.8)	1	0.384 (0.510)	1	0.383 (0.514)	1	0.619 (0.744)	1	0.060 (0.181)	Eval.
(0.3, 0.7)	1	0.361 (0.483)	1	0.361 (0.485)	2	0.634 (0.740)	1	0.057 (0.182)	Eval.
(0.4, 0.6)	2	0.340 (0.460)	1	0.338 (0.462)	3	0.645 (0.751)	1	0.061 (0.183)	Eval.
(0.5, 0.5)	1	0.342 (0.467)	1	0.337 (0.468)	2	0.653 (0.748)	1	0.072 (0.193)	Eval.
(0.6, 0.4)	2	0.343 (0.473)	2	0.340 (0.476)	3	0.661 (0.745)	1	0.073 (0.198)	Eval.
(0.7, 0.3)	2	0.348 (0.484)	2	0.343 (0.488)	2	0.672 (0.741)	1	0.073 (0.199)	Eval.
(0.8, 0.2)	2	0.348 (0.499)	2	0.344 (0.503)	2	0.663 (0.743)	1	0.067 (0.194)	Eval.
(0.9, 0.1)	3	0.354 (0.510)	3	0.349 (0.514)	2	0.635 (0.736)	1	0.071 (0.197)	Eval.
(0.1, 0.9)	1	0.322 (0.489)	1	0.322 (0.491)	1	0.640 (0.752)	1	0.064 (0.186)	Time
(0.2, 0.8)	2	0.304 (0.468)	1	0.299 (0.471)	3	0.627 (0.766)	1	0.058 (0.178)	Time
(0.3, 0.7)	2	0.293 (0.460)	2	0.288 (0.463)	3	0.612 (0.773)	1	0.054 (0.175)	Time
(0.4, 0.6)	2	0.291 (0.467)	2	0.285 (0.470)	3	0.616 (0.774)	1	0.056 (0.175)	Time
(0.5, 0.5)	2	0.291 (0.470)	2	0.285 (0.477)	3	0.622 (0.773)	1	0.060 (0.175)	Time
(0.6, 0.4)	2	0.288 (0.482)	2	0.284 (0.484)	3	0.627 (0.774)	1	0.061 (0.174)	Time
(0.7, 0.3)	2	0.290 (0.490)	2	0.285 (0.491)	2	0.633 (0.773)	1	0.060 (0.173)	Time
(0.8, 0.2)	3	0.296 (0.496)	3	0.291 (0.497)	2	0.641 (0.770)	1	0.057 (0.172)	Time
(0.9, 0.1)	3	0.303 (0.498)	3	0.298 (0.500)	2	0.632 (0.764)	1	0.057 (0.175)	Time

Table 44. SA on 5As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.297 (0.478)	2	0.292 (0.480)	3	0.629 (0.768)	1	0.055 (0.171)	Eval.
(0.2, 0.8)	1	0.289 (0.444)	1	0.284 (0.452)	1	0.611 (0.773)	1	0.055 (0.167)	Eval.
(0.3, 0.7)	2	0.281 (0.421)	2	0.276 (0.417)	3	0.594 (0.780)	1	0.052 (0.158)	Eval.
(0.4, 0.6)	2	0.277 (0.413)	2	0.272 (0.414)	3	0.589 (0.783)	1	0.050 (0.154)	Eval.
(0.5, 0.5)	2	0.275 (0.418)	2	0.272 (0.422)	3	0.597 (0.783)	1	0.048 (0.151)	Eval.
(0.6, 0.4)	2	0.277 (0.424)	2	0.272 (0.424)	3	0.608 (0.782)	1	0.048 (0.150)	Eval.
(0.7, 0.3)	2	0.279 (0.424)	2	0.275 (0.427)	3	0.604 (0.765)	1	0.050 (0.151)	Eval.
(0.8, 0.2)	2	0.282 (0.423)	2	0.279 (0.433)	2	0.610 (0.771)	1	0.053 (0.153)	Eval.
(0.9, 0.1)	3	0.287 (0.428)	3	0.285 (0.441)	2	0.617 (0.769)	1	0.058 (0.157)	Eval.
(0.1, 0.9)	2	0.277 (0.405)	2	0.275 (0.410)	3	0.603 (0.772)	1	0.058 (0.154)	Time
(0.2, 0.8)	2	0.269 (0.384)	2	0.268 (0.384)	3	0.590 (0.776)	1	0.055 (0.150)	Time
(0.3, 0.7)	2	0.262 (0.366)	2	0.263 (0.369)	3	0.592 (0.776)	1	0.049 (0.146)	Time
(0.4, 0.6)	2	0.263 (0.365)	2	0.264 (0.370)	3	0.613 (0.765)	1	0.047 (0.145)	Time
(0.5, 0.5)	2	0.263 (0.371)	2	0.265 (0.378)	3	0.629 (0.755)	1	0.049 (0.144)	Time
(0.6, 0.4)	2	0.263 (0.375)	2	0.266 (0.385)	3	0.617 (0.746)	1	0.045 (0.143)	Time
(0.7, 0.3)	2	0.267 (0.379)	2	0.270 (0.394)	2	0.610 (0.736)	1	0.044 (0.143)	Time
(0.8, 0.2)	3	0.272 (0.389)	3	0.275 (0.402)	2	0.606 (0.756)	1	0.046 (0.144)	Time
(0.9, 0.1)	3	0.275 (0.392)	3	0.278 (0.407)	2	0.611 (0.766)	1	0.049 (0.145)	Time

Table 45. SOGA on 5As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	1.000 (0.000)	2	1.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	1	0.087 (0.104)	1	0.155 (0.104)	3	1.000 (1.000)	2	0.434 (0.434)	Eval.
(0.3, 0.7)	1	0.155 (0.123)	1	0.155 (0.123)	2	0.821 (1.000)	3	0.434 (0.869)	Eval.
(0.4, 0.6)	1	0.094 (0.608)	1	0.094 (0.534)	1	0.804 (0.392)	2	0.856 (0.482)	Eval.
(0.5, 0.5)	1	0.026 (0.429)	1	0.026 (0.429)	1	0.678 (0.497)	2	0.992 (0.611)	Eval.
(0.6, 0.4)	1	0.131 (0.311)	1	0.131 (0.311)	3	0.672 (0.541)	2	0.725 (0.718)	Eval.
(0.7, 0.3)	1	0.064 (0.344)	1	0.064 (0.344)	2	0.687 (0.515)	3	0.738 (0.685)	Eval.
(0.8, 0.2)	1	0.081 (0.355)	1	0.081 (0.338)	3	0.693 (0.506)	2	0.743 (0.673)	Eval.
(0.9, 0.1)	1	0.098 (0.220)	1	0.098 (0.220)	2	0.557 (0.408)	3	0.769 (0.722)	Eval.
(0.1, 0.9)	2	0.095 (0.210)	2	0.139 (0.210)	1	0.577 (0.780)	1	0.780 (0.723)	Time
(0.2, 0.8)	1	0.139 (0.210)	1	0.139 (0.210)	3	0.577 (0.898)	2	0.390 (0.723)	Time
(0.3, 0.7)	1	0.098 (0.220)	1	0.098 (0.220)	2	0.725 (0.532)	3	0.769 (0.722)	Time
(0.4, 0.6)	1	0.127 (0.285)	1	0.127 (0.285)	1	0.719 (0.527)	2	0.993 (0.642)	Time
(0.5, 0.5)	1	0.115 (0.389)	1	0.115 (0.389)	1	0.557 (0.408)	2	0.769 (0.722)	Time
(0.6, 0.4)	1	0.112 (0.377)	1	0.112 (0.377)	3	0.540 (0.516)	2	0.746 (0.731)	Time
(0.7, 0.3)	1	0.081 (0.186)	1	0.081 (0.338)	2	0.693 (0.506)	3	0.743 (0.673)	Time
(0.8, 0.2)	1	0.098 (0.220)	1	0.098 (0.220)	3	0.557 (0.408)	2	0.769 (0.722)	Time
(0.9, 0.1)	1	0.098 (0.220)	1	0.098 (0.220)	2	0.557 (0.408)	3	0.769 (0.722)	Time

Table 46. HC on 5As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.098 (0.389)	2	0.098 (0.389)	3	0.557 (0.532)	1	0.769 (0.722)	Eval.
(0.2, 0.8)	1	0.115 (0.389)	1	0.114 (0.389)	3	0.725 (0.532)	2	0.769 (0.722)	Eval.
(0.3, 0.7)	1	0.115 (0.389)	1	0.115 (0.389)	3	0.725 (0.532)	2	0.769 (0.722)	Eval.
(0.4, 0.6)	1	0.098 (0.473)	2	0.098 (0.473)	3	0.615 (0.694)	2	0.653 (0.640)	Eval.
(0.5, 0.5)	1	0.098 (0.473)	1	0.098 (0.473)	3	0.615 (0.694)	2	0.658 (0.640)	Eval.
(0.6, 0.4)	1	0.072 (0.457)	1	0.071 (0.441)	3	0.643 (0.690)	2	0.647 (0.659)	Eval.
(0.7, 0.3)	1	0.143 (0.430)	1	0.143 (0.430)	3	0.611 (0.714)	2	0.615 (0.571)	Eval.
(0.8, 0.2)	1	0.149 (0.448)	1	0.149 (0.448)	2	0.637 (0.701)	2	0.642 (0.595)	Eval.
(0.9, 0.1)	1	0.106 (0.473)	1	0.129 (0.473)	2	0.615 (0.694)	3	0.653 (0.629)	Eval.
(0.1, 0.9)	2	0.170 (0.439)	2	0.172 (0.431)	3	0.607 (0.693)	1	0.607 (0.580)	Time
(0.2, 0.8)	1	0.116 (0.349)	1	0.116 (0.349)	2	0.496 (0.767)	1	0.496 (0.495)	Time
(0.3, 0.7)	1	0.117 (0.380)	1	0.117 (0.367)	3	0.499 (0.766)	2	0.499 (0.483)	Time
(0.4, 0.6)	1	0.115 (0.404)	1	0.115 (0.402)	2	0.491 (0.770)	1	0.491 (0.464)	Time
(0.5, 0.5)	1	0.106 (0.389)	1	0.106 (0.393)	3	0.453 (0.789)	2	0.450 (0.421)	Time
(0.6, 0.4)	1	0.173 (0.388)	1	0.175 (0.390)	3	0.533 (0.787)	2	0.454 (0.425)	Time
(0.7, 0.3)	1	0.171 (0.385)	1	0.173 (0.387)	3	0.538 (0.785)	2	0.459 (0.429)	Time
(0.8, 0.2)	1	0.149 (0.384)	1	0.152 (0.383)	2	0.546 (0.781)	2	0.466 (0.435)	Time
(0.9, 0.1)	1	0.111 (0.382)	1	0.111 (0.383)	2	0.477 (0.778)	3	0.474 (0.457)	Time

Table 47. RS on 5As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.145 (0.385)	2	0.147 (0.388)	3	0.533 (0.787)	1	0.454 (0.431)	Eval.
(0.2, 0.8)	1	0.163 (0.389)	1	0.165 (0.395)	2	0.514 (0.795)	1	0.438 (0.409)	Eval.
(0.3, 0.7)	1	0.183 (0.399)	1	0.181 (0.408)	1	0.506 (0.797)	1	0.432 (0.404)	Eval.
(0.4, 0.6)	1	0.198 (0.400)	1	0.198 (0.416)	2	0.494 (0.802)	1	0.423 (0.394)	Eval.
(0.5, 0.5)	1	0.191 (0.401)	1	0.191 (0.420)	3	0.553 (0.733)	2	0.411 (0.381)	Eval.
(0.6, 0.4)	1	0.191 (0.401)	1	0.191 (0.420)	3	0.572 (0.724)	2	0.409 (0.385)	Eval.
(0.7, 0.3)	1	0.186 (0.397)	1	0.186 (0.413)	3	0.594 (0.717)	2	0.408 (0.398)	Eval.
(0.8, 0.2)	1	0.183 (0.392)	1	0.183 (0.408)	2	0.575 (0.719)	2	0.409 (0.400)	Eval.
(0.9, 0.1)	1	0.196 (0.398)	1	0.196 (0.415)	2	0.564 (0.727)	3	0.417 (0.390)	Eval.
(0.1, 0.9)	2	0.192 (0.392)	2	0.192 (0.409)	3	0.573 (0.724)	1	0.408 (0.382)	Time
(0.2, 0.8)	1	0.187 (0.391)	1	0.187 (0.405)	3	0.593 (0.717)	2	0.406 (0.384)	Time
(0.3, 0.7)	1	0.183 (0.391)	1	0.183 (0.403)	3	0.614 (0.719)	2	0.405 (0.391)	Time
(0.4, 0.6)	1	0.176 (0.392)	1	0.177 (0.404)	2	0.613 (0.726)	1	0.397 (0.389)	Time
(0.5, 0.5)	1	0.188 (0.387)	1	0.182 (0.401)	3	0.617 (0.737)	2	0.387 (0.389)	Time
(0.6, 0.4)	1	0.205 (0.386)	1	0.198 (0.401)	3	0.623 (0.735)	2	0.390 (0.399)	Time
(0.7, 0.3)	1	0.190 (0.386)	1	0.184 (0.401)	2	0.626 (0.734)	2	0.393 (0.409)	Time
(0.8, 0.2)	1	0.175 (0.386)	1	0.173 (0.399)	2	0.614 (0.730)	2	0.395 (0.409)	Time
(0.9, 0.1)	1	0.184 (0.395)	1	0.184 (0.407)	2	0.611 (0.718)	3	0.406 (0.400)	Time

Table 48. SA on 5As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.179 (0.389)	2	0.178 (0.403)	3	0.609 (0.727)	1	0.394 (0.388)	Eval.
(0.2, 0.8)	2	0.190 (0.389)	2	0.186 (0.400)	3	0.618 (0.734)	1	0.387 (0.380)	Eval.
(0.3, 0.7)	2	0.199 (0.390)	2	0.196 (0.400)	3	0.612 (0.739)	1	0.381 (0.379)	Eval.
(0.4, 0.6)	2	0.209 (0.389)	2	0.206 (0.402)	3	0.602 (0.744)	1	0.374 (0.374)	Eval.
(0.5, 0.5)	1	0.219 (0.389)	1	0.217 (0.403)	2	0.591 (0.749)	1	0.368 (0.367)	Eval.
(0.6, 0.4)	1	0.231 (0.390)	1	0.228 (0.404)	3	0.591 (0.749)	2	0.368 (0.371)	Eval.
(0.7, 0.3)	1	0.228 (0.388)	1	0.224 (0.403)	3	0.596 (0.747)	2	0.370 (0.373)	Eval.
(0.8, 0.2)	1	0.219 (0.389)	1	0.214 (0.403)	3	0.599 (0.742)	2	0.372 (0.371)	Eval.
(0.9, 0.1)	1	0.208 (0.388)	1	0.205 (0.402)	2	0.602 (0.744)	3	0.374 (0.373)	Eval.
(0.1, 0.9)	2	0.216 (0.386)	2	0.210 (0.399)	3	0.598 (0.746)	1	0.372 (0.380)	Time
(0.2, 0.8)	2	0.224 (0.386)	2	0.218 (0.399)	3	0.600 (0.745)	1	0.364 (0.380)	Time
(0.3, 0.7)	1	0.231 (0.387)	1	0.228 (0.400)	2	0.616 (0.741)	1	0.373 (0.379)	Time
(0.4, 0.6)	2	0.236 (0.391)	3	0.234 (0.406)	4	0.614 (0.735)	1	0.373 (0.374)	Time
(0.5, 0.5)	1	0.242 (0.390)	1	0.241 (0.404)	3	0.619 (0.734)	2	0.368 (0.367)	Time
(0.6, 0.4)	1	0.248 (0.389)	1	0.248 (0.403)	3	0.639 (0.727)	2	0.369 (0.369)	Time
(0.7, 0.3)	1	0.242 (0.389)	1	0.240 (0.402)	3	0.626 (0.721)	2	0.371 (0.370)	Time
(0.8, 0.2)	1	0.235 (0.389)	1	0.232 (0.402)	3	0.616 (0.727)	2	0.373 (0.372)	Time
(0.9, 0.1)	1	0.226 (0.388)	1	0.226 (0.402)	2	0.606 (0.738)	3	0.375 (0.381)	Time

Table 49. SOGA on 5As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	1	1.000 (0.000)	Eval.
(0.2, 0.8)	2	0.093 (0.093)	3	0.132 (0.132)	4	1.000 (1.000)	1	0.027 (0.027)	Eval.
(0.3, 0.7)	2	0.093 (0.118)	2	0.123 (0.132)	3	0.870 (1.000)	1	0.027 (0.055)	Eval.
(0.4, 0.6)	2	0.082 (0.026)	2	0.098 (0.014)	3	0.866 (0.267)	1	0.028 (0.056)	Eval.
(0.5, 0.5)	1	0.086 (0.030)	1	0.107 (0.028)	2	0.846 (0.309)	1	0.033 (0.065)	Eval.
(0.6, 0.4)	1	0.086 (0.031)	2	0.110 (0.028)	4	0.846 (0.463)	3	0.065 (0.098)	Eval.
(0.7, 0.3)	1	0.077 (0.031)	2	0.110 (0.028)	4	0.691 (0.617)	3	0.065 (0.130)	Eval.
(0.8, 0.2)	1	0.046 (0.032)	1	0.080 (0.029)	3	0.681 (0.638)	2	0.067 (0.135)	Eval.
(0.9, 0.1)	1	0.081 (0.048)	1	0.124 (0.069)	2	0.634 (0.732)	1	0.074 (0.151)	Eval.
(0.1, 0.9)	1	0.088 (0.105)	1	0.131 (0.120)	1	0.637 (0.908)	1	0.081 (0.153)	Time
(0.2, 0.8)	2	0.075 (0.089)	3	0.111 (0.101)	4	0.539 (0.922)	1	0.036 (0.130)	Time
(0.3, 0.7)	2	0.077 (0.040)	2	0.110 (0.059)	3	0.691 (0.771)	1	0.033 (0.130)	Time
(0.4, 0.6)	2	0.077 (0.040)	2	0.107 (0.059)	3	0.691 (0.771)	1	0.033 (0.098)	Time
(0.5, 0.5)	1	0.077 (0.040)	1	0.107 (0.059)	2	0.691 (0.771)	1	0.065 (0.098)	Time
(0.6, 0.4)	1	0.077 (0.040)	2	0.107 (0.059)	4	0.691 (0.771)	3	0.065 (0.130)	Time
(0.7, 0.3)	1	0.074 (0.031)	1	0.107 (0.028)	3	0.690 (0.619)	2	0.062 (0.128)	Time
(0.8, 0.2)	1	0.081 (0.048)	1	0.124 (0.069)	3	0.634 (0.732)	2	0.074 (0.151)	Time
(0.9, 0.1)	1	0.081 (0.048)	1	0.124 (0.069)	2	0.634 (0.732)	1	0.074 (0.151)	Time

Table 50. HC on 5As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.068 (0.040)	1	0.105 (0.059)	1	0.536 (0.774)	1	0.062 (0.160)	Eval.
(0.2, 0.8)	1	0.074 (0.040)	2	0.105 (0.059)	3	0.690 (0.774)	1	0.065 (0.160)	Eval.
(0.3, 0.7)	2	0.074 (0.053)	2	0.107 (0.059)	3	0.690 (0.774)	1	0.095 (0.160)	Eval.
(0.4, 0.6)	2	0.066 (0.047)	2	0.095 (0.062)	3	0.613 (0.799)	1	0.084 (0.171)	Eval.
(0.5, 0.5)	1	0.075 (0.053)	1	0.097 (0.063)	2	0.625 (0.795)	1	0.086 (0.175)	Eval.
(0.6, 0.4)	1	0.053 (0.060)	1	0.077 (0.068)	3	0.659 (0.650)	2	0.065 (0.163)	Eval.
(0.7, 0.3)	1	0.055 (0.125)	1	0.083 (0.113)	3	0.681 (0.638)	2	0.101 (0.168)	Eval.
(0.8, 0.2)	1	0.055 (0.109)	1	0.083 (0.097)	3	0.681 (0.695)	2	0.101 (0.177)	Eval.
(0.9, 0.1)	1	0.055 (0.100)	1	0.083 (0.109)	2	0.681 (0.797)	1	0.101 (0.168)	Eval.
(0.1, 0.9)	2	0.053 (0.126)	2	0.081 (0.117)	3	0.659 (0.764)	1	0.098 (0.170)	Time
(0.2, 0.8)	2	0.047 (0.124)	2	0.072 (0.115)	3	0.587 (0.747)	1	0.087 (0.166)	Time
(0.3, 0.7)	1	0.056 (0.138)	2	0.072 (0.129)	3	0.587 (0.737)	1	0.087 (0.174)	Time
(0.4, 0.6)	1	0.056 (0.147)	1	0.072 (0.135)	2	0.622 (0.722)	1	0.087 (0.179)	Time
(0.5, 0.5)	1	0.056 (0.148)	1	0.072 (0.136)	2	0.691 (0.688)	1	0.093 (0.181)	Time
(0.6, 0.4)	1	0.055 (0.147)	1	0.071 (0.134)	3	0.621 (0.688)	2	0.103 (0.182)	Time
(0.7, 0.3)	1	0.062 (0.150)	1	0.068 (0.135)	3	0.613 (0.683)	2	0.109 (0.181)	Time
(0.8, 0.2)	1	0.053 (0.149)	1	0.062 (0.134)	3	0.607 (0.721)	2	0.099 (0.175)	Time
(0.9, 0.1)	1	0.057 (0.145)	1	0.074 (0.129)	2	0.618 (0.739)	1	0.101 (0.183)	Time



Table 51. RS on 5As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.058 (0.147)	1	0.066 (0.135)	1	0.586 (0.748)	1	0.103 (0.180)	Eval.
(0.2, 0.8)	1	0.054 (0.157)	2	0.060 (0.146)	3	0.592 (0.747)	1	0.104 (0.184)	Eval.
(0.3, 0.7)	2	0.040 (0.171)	2	0.048 (0.160)	3	0.609 (0.743)	1	0.091 (0.176)	Eval.
(0.4, 0.6)	1	0.040 (0.183)	1	0.055 (0.171)	2	0.683 (0.707)	1	0.091 (0.183)	Eval.
(0.5, 0.5)	1	0.042 (0.184)	1	0.054 (0.178)	2	0.717 (0.708)	1	0.090 (0.188)	Eval.
(0.6, 0.4)	1	0.045 (0.183)	1	0.054 (0.174)	3	0.687 (0.708)	2	0.091 (0.191)	Eval.
(0.7, 0.3)	1	0.052 (0.180)	1	0.054 (0.163)	3	0.636 (0.708)	2	0.095 (0.191)	Eval.
(0.8, 0.2)	1	0.054 (0.177)	1	0.054 (0.157)	3	0.613 (0.708)	2	0.094 (0.189)	Eval.
(0.9, 0.1)	1	0.048 (0.174)	1	0.054 (0.168)	2	0.595 (0.750)	1	0.090 (0.187)	Eval.
(0.1, 0.9)	1	0.053 (0.177)	1	0.054 (0.168)	2	0.613 (0.744)	1	0.093 (0.188)	Time
(0.2, 0.8)	2	0.054 (0.181)	2	0.058 (0.165)	3	0.636 (0.735)	1	0.097 (0.189)	Time
(0.3, 0.7)	2	0.058 (0.178)	2	0.061 (0.159)	3	0.657 (0.721)	1	0.097 (0.181)	Time
(0.4, 0.6)	2	0.063 (0.185)	2	0.068 (0.159)	3	0.702 (0.714)	1	0.103 (0.185)	Time
(0.5, 0.5)	1	0.069 (0.186)	1	0.074 (0.160)	2	0.711 (0.710)	1	0.106 (0.187)	Time
(0.6, 0.4)	1	0.068 (0.187)	2	0.074 (0.160)	3	0.715 (0.712)	2	0.104 (0.176)	Time
(0.7, 0.3)	1	0.069 (0.185)	1	0.076 (0.158)	3	0.676 (0.712)	2	0.105 (0.169)	Time
(0.8, 0.2)	1	0.061 (0.179)	1	0.067 (0.156)	2	0.631 (0.715)	1	0.100 (0.168)	Time
(0.9, 0.1)	1	0.066 (0.180)	1	0.070 (0.159)	2	0.613 (0.744)	1	0.105 (0.183)	Time

Table 52. SA on 5As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.069 (0.185)	2	0.075 (0.160)	3	0.635 (0.735)	1	0.101 (0.182)	Eval.
(0.2, 0.8)	1	0.070 (0.183)	1	0.077 (0.157)	1	0.649 (0.721)	1	0.093 (0.173)	Eval.
(0.3, 0.7)	2	0.073 (0.177)	2	0.078 (0.156)	3	0.661 (0.731)	1	0.086 (0.165)	Eval.
(0.4, 0.6)	2	0.079 (0.181)	2	0.083 (0.163)	3	0.663 (0.730)	1	0.083 (0.165)	Eval.
(0.5, 0.5)	2	0.083 (0.185)	2	0.089 (0.166)	3	0.669 (0.728)	1	0.084 (0.166)	Eval.
(0.6, 0.4)	2	0.090 (0.186)	2	0.093 (0.167)	3	0.675 (0.725)	1	0.085 (0.166)	Eval.
(0.7, 0.3)	2	0.092 (0.185)	2	0.097 (0.166)	3	0.681 (0.723)	1	0.085 (0.166)	Eval.
(0.8, 0.2)	1	0.090 (0.186)	1	0.093 (0.166)	2	0.669 (0.719)	1	0.086 (0.167)	Eval.
(0.9, 0.1)	2	0.086 (0.186)	2	0.091 (0.166)	3	0.641 (0.730)	1	0.087 (0.168)	Eval.
(0.1, 0.9)	2	0.086 (0.181)	2	0.090 (0.161)	3	0.654 (0.725)	1	0.085 (0.161)	Time
(0.2, 0.8)	2	0.087 (0.178)	2	0.091 (0.159)	3	0.655 (0.734)	1	0.082 (0.155)	Time
(0.3, 0.7)	2	0.100 (0.176)	2	0.104 (0.158)	3	0.650 (0.729)	1	0.087 (0.160)	Time
(0.4, 0.6)	2	0.099 (0.178)	2	0.105 (0.160)	3	0.652 (0.730)	1	0.080 (0.156)	Time
(0.5, 0.5)	2	0.098 (0.177)	2	0.103 (0.161)	3	0.656 (0.732)	1	0.071 (0.151)	Time
(0.6, 0.4)	2	0.098 (0.174)	2	0.104 (0.160)	3	0.663 (0.730)	1	0.067 (0.151)	Time
(0.7, 0.3)	1	0.098 (0.173)	1	0.103 (0.159)	2	0.668 (0.728)	1	0.071 (0.150)	Time
(0.8, 0.2)	1	0.096 (0.173)	1	0.101 (0.159)	3	0.673 (0.726)	2	0.073 (0.149)	Time
(0.9, 0.1)	2	0.095 (0.179)	2	0.100 (0.160)	3	0.656 (0.723)	1	0.071 (0.149)	Time

Table 53. SOGA on 10AS-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	1	0.000 (0.000)	1	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.125 (0.125)	2	0.125 (0.125)	3	1.000 (0.125)	1	0.014 (0.014)	Eval.
(0.3, 0.7)	2	0.125 (0.250)	2	0.125 (0.250)	3	0.875 (0.250)	1	0.014 (0.066)	Eval.
(0.4, 0.6)	2	0.239 (0.254)	2	0.239 (0.254)	3	0.873 (0.254)	1	0.038 (0.053)	Eval.
(0.5, 0.5)	2	0.274 (0.290)	2	0.274 (0.290)	2	0.855 (0.290)	1	0.043 (0.060)	Eval.
(0.6, 0.4)	3	0.419 (0.436)	3	0.419 (0.436)	2	0.855 (0.436)	1	0.043 (0.060)	Eval.
(0.7, 0.3)	3	0.422 (0.578)	3	0.422 (0.578)	2	0.711 (0.578)	1	0.035 (0.064)	Eval.
(0.8, 0.2)	3	0.566 (0.579)	3	0.566 (0.579)	2	0.710 (0.579)	1	0.033 (0.063)	Eval.
(0.9, 0.1)	2	0.661 (0.677)	2	0.661 (0.677)	1	0.661 (0.677)	1	0.003 (0.054)	Eval.
(0.1, 0.9)	1	0.566 (0.723)	1	0.566 (0.723)	2	0.711 (0.723)	1	0.004 (0.048)	Time
(0.2, 0.8)	2	0.422 (0.723)	2	0.422 (0.723)	3	0.711 (0.723)	1	0.004 (0.048)	Time
(0.3, 0.7)	2	0.422 (0.723)	2	0.422 (0.723)	3	0.855 (0.578)	1	0.004 (0.064)	Time
(0.4, 0.6)	2	0.421 (0.579)	2	0.421 (0.579)	3	0.710 (0.579)	1	0.002 (0.046)	Time
(0.5, 0.5)	2	0.421 (0.579)	2	0.421 (0.579)	2	0.710 (0.579)	1	0.033 (0.063)	Time
(0.6, 0.4)	3	0.421 (0.579)	3	0.421 (0.579)	2	0.710 (0.579)	1	0.033 (0.063)	Time
(0.7, 0.3)	3	0.566 (0.578)	3	0.566 (0.578)	2	0.711 (0.578)	1	0.035 (0.064)	Time
(0.8, 0.2)	3	0.661 (0.677)	3	0.661 (0.677)	2	0.661 (0.677)	1	0.003 (0.054)	Time
(0.9, 0.1)	3	0.661 (0.677)	3	0.661 (0.677)	1	0.661 (0.677)	2	0.003 (0.054)	Time

Table 54. HC on 10AS-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.566 (0.724)	1	0.566 (0.724)	1	0.566 (0.724)	1	0.002 (0.063)	Eval.
(0.2, 0.8)	1	0.572 (0.724)	1	0.638 (0.724)	1	0.710 (0.724)	1	0.033 (0.063)	Eval.
(0.3, 0.7)	1	0.710 (0.724)	1	0.710 (0.724)	2	0.710 (0.724)	1	0.033 (0.063)	Eval.
(0.4, 0.6)	1	0.620 (0.633)	1	0.620 (0.633)	2	0.620 (0.759)	1	0.029 (0.071)	Eval.
(0.5, 0.5)	1	0.620 (0.633)	1	0.620 (0.633)	2	0.620 (0.759)	1	0.029 (0.071)	Eval.
(0.6, 0.4)	1	0.620 (0.529)	2	0.620 (0.554)	3	0.620 (0.633)	1	0.040 (0.263)	Eval.
(0.7, 0.3)	2	0.620 (0.507)	2	0.620 (0.507)	2	0.736 (0.634)	1	0.038 (0.483)	Eval.
(0.8, 0.2)	2	0.620 (0.534)	2	0.620 (0.550)	2	0.620 (0.634)	1	0.038 (0.435)	Eval.
(0.9, 0.1)	2	0.620 (0.634)	3	0.620 (0.631)	2	0.620 (0.760)	1	0.038 (0.392)	Eval.
(0.1, 0.9)	1	0.620 (0.573)	1	0.620 (0.582)	2	0.620 (0.726)	1	0.053 (0.527)	Time
(0.2, 0.8)	1	0.555 (0.515)	1	0.555 (0.542)	2	0.669 (0.672)	1	0.047 (0.542)	Time
(0.3, 0.7)	1	0.468 (0.419)	1	0.468 (0.445)	2	0.564 (0.723)	1	0.040 (0.521)	Time
(0.4, 0.6)	1	0.439 (0.389)	1	0.447 (0.413)	2	0.523 (0.743)	1	0.037 (0.517)	Time
(0.5, 0.5)	2	0.446 (0.387)	2	0.455 (0.414)	3	0.524 (0.743)	1	0.042 (0.519)	Time
(0.6, 0.4)	2	0.446 (0.393)	2	0.457 (0.419)	3	0.536 (0.737)	1	0.049 (0.516)	Time
(0.7, 0.3)	2	0.460 (0.404)	2	0.461 (0.429)	2	0.554 (0.728)	1	0.051 (0.519)	Time
(0.8, 0.2)	2	0.471 (0.402)	2	0.471 (0.437)	2	0.567 (0.722)	1	0.052 (0.520)	Time
(0.9, 0.1)	3	0.484 (0.411)	3	0.484 (0.448)	2	0.583 (0.714)	1	0.054 (0.515)	Time

Table 55. RS on 10As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.445 (0.412)	1	0.445 (0.444)	1	0.536 (0.737)	1	0.059 (0.516)	Eval.
(0.2, 0.8)	1	0.414 (0.421)	1	0.425 (0.421)	1	0.495 (0.757)	1	0.069 (0.513)	Eval.
(0.3, 0.7)	1	0.411 (0.397)	1	0.421 (0.397)	1	0.485 (0.771)	1	0.081 (0.513)	Eval.
(0.4, 0.6)	1	0.398 (0.377)	1	0.407 (0.377)	1	0.494 (0.795)	1	0.088 (0.503)	Eval.
(0.5, 0.5)	1	0.400 (0.363)	1	0.404 (0.364)	2	0.485 (0.805)	1	0.109 (0.500)	Eval.
(0.6, 0.4)	1	0.418 (0.369)	1	0.415 (0.369)	2	0.494 (0.794)	1	0.134 (0.505)	Eval.
(0.7, 0.3)	1	0.413 (0.375)	1	0.410 (0.375)	2	0.501 (0.770)	1	0.156 (0.506)	Eval.
(0.8, 0.2)	2	0.414 (0.385)	2	0.413 (0.385)	2	0.515 (0.744)	1	0.174 (0.510)	Eval.
(0.9, 0.1)	2	0.404 (0.390)	2	0.409 (0.390)	2	0.521 (0.791)	1	0.159 (0.509)	Eval.
(0.1, 0.9)	1	0.400 (0.369)	1	0.399 (0.376)	1	0.494 (0.794)	1	0.167 (0.505)	Time
(0.2, 0.8)	1	0.395 (0.362)	1	0.395 (0.373)	1	0.471 (0.784)	1	0.173 (0.507)	Time
(0.3, 0.7)	1	0.384 (0.358)	1	0.384 (0.366)	2	0.452 (0.776)	1	0.178 (0.501)	Time
(0.4, 0.6)	2	0.377 (0.356)	2	0.377 (0.365)	3	0.459 (0.768)	1	0.184 (0.496)	Time
(0.5, 0.5)	1	0.382 (0.354)	1	0.382 (0.362)	2	0.490 (0.755)	1	0.201 (0.498)	Time
(0.6, 0.4)	2	0.385 (0.346)	2	0.385 (0.356)	3	0.522 (0.752)	1	0.214 (0.495)	Time
(0.7, 0.3)	2	0.389 (0.342)	2	0.389 (0.352)	2	0.502 (0.750)	1	0.221 (0.495)	Time
(0.8, 0.2)	2	0.394 (0.355)	2	0.393 (0.363)	2	0.494 (0.746)	1	0.213 (0.499)	Time
(0.9, 0.1)	3	0.388 (0.369)	3	0.388 (0.373)	2	0.481 (0.750)	1	0.203 (0.494)	Time

Table 56. SA on 10As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.385 (0.368)	1	0.385 (0.373)	1	0.482 (0.752)	1	0.190 (0.474)	Eval.
(0.2, 0.8)	2	0.372 (0.363)	2	0.372 (0.371)	2	0.481 (0.761)	1	0.179 (0.451)	Eval.
(0.3, 0.7)	2	0.364 (0.360)	2	0.364 (0.368)	2	0.493 (0.766)	1	0.172 (0.435)	Eval.
(0.4, 0.6)	2	0.355 (0.353)	2	0.355 (0.360)	2	0.481 (0.772)	1	0.162 (0.420)	Eval.
(0.5, 0.5)	2	0.350 (0.349)	2	0.352 (0.356)	3	0.476 (0.778)	1	0.153 (0.409)	Eval.
(0.6, 0.4)	2	0.354 (0.344)	2	0.360 (0.352)	3	0.480 (0.777)	1	0.151 (0.406)	Eval.
(0.7, 0.3)	2	0.355 (0.342)	2	0.358 (0.347)	3	0.485 (0.775)	1	0.149 (0.406)	Eval.
(0.8, 0.2)	2	0.359 (0.351)	2	0.359 (0.356)	2	0.490 (0.772)	1	0.144 (0.405)	Eval.
(0.9, 0.1)	2	0.361 (0.360)	2	0.361 (0.367)	2	0.493 (0.771)	1	0.139 (0.404)	Eval.
(0.1, 0.9)	2	0.351 (0.356)	2	0.351 (0.361)	2	0.480 (0.777)	1	0.131 (0.389)	Time
(0.2, 0.8)	2	0.346 (0.351)	2	0.349 (0.356)	2	0.469 (0.782)	1	0.125 (0.375)	Time
(0.3, 0.7)	2	0.345 (0.341)	2	0.352 (0.347)	3	0.473 (0.787)	1	0.121 (0.363)	Time
(0.4, 0.6)	2	0.352 (0.335)	2	0.358 (0.341)	3	0.488 (0.781)	1	0.119 (0.361)	Time
(0.5, 0.5)	2	0.357 (0.332)	2	0.362 (0.338)	3	0.509 (0.771)	1	0.118 (0.359)	Time
(0.6, 0.4)	2	0.356 (0.328)	2	0.362 (0.336)	3	0.525 (0.762)	1	0.116 (0.357)	Time
(0.7, 0.3)	2	0.355 (0.332)	2	0.360 (0.338)	2	0.512 (0.752)	1	0.112 (0.355)	Time
(0.8, 0.2)	2	0.353 (0.338)	2	0.356 (0.343)	2	0.499 (0.756)	1	0.108 (0.353)	Time
(0.9, 0.1)	2	0.351 (0.349)	2	0.354 (0.353)	2	0.490 (0.775)	1	0.107 (0.352)	Time

Table 57. SOGA on 10As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	2	0.129 (0.000)	3	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.117 (0.117)	2	0.129 (0.007)	3	1.000 (0.115)	1	0.024 (0.024)	Eval.
(0.3, 0.7)	2	0.109 (0.117)	3	0.122 (0.008)	4	0.885 (0.230)	1	0.024 (0.049)	Eval.
(0.4, 0.6)	2	0.087 (0.013)	2	0.101 (0.009)	3	0.882 (0.236)	1	0.025 (0.050)	Eval.
(0.5, 0.5)	1	0.093 (0.024)	2	0.114 (0.010)	3	0.866 (0.267)	1	0.028 (0.056)	Eval.
(0.6, 0.4)	1	0.095 (0.024)	2	0.122 (0.017)	3	0.866 (0.401)	1	0.056 (0.085)	Eval.
(0.7, 0.3)	1	0.095 (0.024)	1	0.114 (0.031)	3	0.733 (0.535)	2	0.056 (0.113)	Eval.
(0.8, 0.2)	1	0.069 (0.025)	1	0.088 (0.032)	3	0.725 (0.550)	2	0.058 (0.116)	Eval.
(0.9, 0.1)	2	0.105 (0.059)	2	0.127 (0.033)	3	0.690 (0.619)	1	0.062 (0.128)	Eval.
(0.1, 0.9)	1	0.093 (0.059)	2	0.114 (0.029)	3	0.733 (0.668)	1	0.056 (0.113)	Time
(0.2, 0.8)	2	0.093 (0.059)	2	0.114 (0.029)	3	0.733 (0.668)	1	0.028 (0.113)	Time
(0.3, 0.7)	2	0.095 (0.051)	3	0.114 (0.024)	4	0.866 (0.535)	1	0.028 (0.113)	Time
(0.4, 0.6)	2	0.093 (0.051)	2	0.112 (0.029)	3	0.733 (0.535)	1	0.028 (0.085)	Time
(0.5, 0.5)	1	0.093 (0.051)	2	0.114 (0.029)	3	0.733 (0.535)	1	0.056 (0.085)	Time
(0.6, 0.4)	1	0.093 (0.051)	2	0.114 (0.036)	3	0.733 (0.535)	1	0.056 (0.113)	Time
(0.7, 0.3)	1	0.093 (0.024)	1	0.112 (0.031)	3	0.732 (0.536)	2	0.054 (0.111)	Time
(0.8, 0.2)	1	0.105 (0.059)	1	0.127 (0.033)	3	0.690 (0.619)	2	0.062 (0.128)	Time
(0.9, 0.1)	2	0.105 (0.059)	2	0.127 (0.033)	3	0.690 (0.619)	1	0.062 (0.128)	Time

Table 58. HC on 10As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.091 (0.051)	1	0.110 (0.036)	2	0.598 (0.670)	1	0.054 (0.139)	Eval.
(0.2, 0.8)	1	0.093 (0.051)	1	0.112 (0.036)	2	0.732 (0.670)	1	0.082 (0.139)	Eval.
(0.3, 0.7)	1	0.093 (0.060)	1	0.112 (0.036)	2	0.732 (0.670)	1	0.082 (0.139)	Eval.
(0.4, 0.6)	1	0.082 (0.053)	1	0.099 (0.049)	1	0.645 (0.709)	1	0.072 (0.147)	Eval.
(0.5, 0.5)	2	0.082 (0.059)	2	0.099 (0.049)	3	0.645 (0.709)	1	0.072 (0.147)	Eval.
(0.6, 0.4)	2	0.063 (0.237)	2	0.085 (0.247)	3	0.692 (0.605)	1	0.077 (0.284)	Eval.
(0.7, 0.3)	1	0.063 (0.383)	1	0.085 (0.370)	2	0.692 (0.605)	1	0.077 (0.411)	Eval.
(0.8, 0.2)	1	0.063 (0.346)	1	0.085 (0.336)	2	0.637 (0.605)	1	0.077 (0.388)	Eval.
(0.9, 0.1)	1	0.063 (0.315)	2	0.085 (0.296)	3	0.637 (0.726)	1	0.077 (0.361)	Eval.
(0.1, 0.9)	1	0.063 (0.408)	1	0.085 (0.398)	2	0.637 (0.708)	1	0.077 (0.436)	Time
(0.2, 0.8)	1	0.063 (0.500)	1	0.091 (0.482)	1	0.688 (0.607)	1	0.094 (0.509)	Time
(0.3, 0.7)	1	0.051 (0.465)	2	0.074 (0.452)	3	0.614 (0.680)	1	0.083 (0.471)	Time
(0.4, 0.6)	1	0.049 (0.448)	1	0.070 (0.449)	1	0.581 (0.697)	1	0.078 (0.464)	Time
(0.5, 0.5)	1	0.037 (0.459)	1	0.052 (0.464)	2	0.583 (0.706)	1	0.061 (0.462)	Time
(0.6, 0.4)	1	0.038 (0.464)	1	0.068 (0.454)	1	0.596 (0.699)	1	0.062 (0.464)	Time
(0.7, 0.3)	1	0.038 (0.463)	2	0.069 (0.451)	3	0.606 (0.694)	1	0.084 (0.463)	Time
(0.8, 0.2)	1	0.044 (0.464)	1	0.071 (0.448)	2	0.621 (0.686)	1	0.087 (0.463)	Time
(0.9, 0.1)	2	0.046 (0.462)	3	0.073 (0.451)	4	0.636 (0.679)	1	0.089 (0.464)	Time

Table 59. RS on 10As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.053 (0.464)	1	0.068 (0.454)	1	0.596 (0.699)	1	0.083 (0.465)	Eval.
(0.2, 0.8)	2	0.061 (0.457)	2	0.072 (0.456)	2	0.559 (0.718)	1	0.078 (0.466)	Eval.
(0.3, 0.7)	1	0.071 (0.456)	2	0.078 (0.451)	3	0.522 (0.736)	1	0.073 (0.457)	Eval.
(0.4, 0.6)	1	0.085 (0.459)	1	0.090 (0.449)	1	0.508 (0.752)	1	0.091 (0.453)	Eval.
(0.5, 0.5)	1	0.103 (0.471)	1	0.111 (0.459)	1	0.535 (0.767)	1	0.099 (0.449)	Eval.
(0.6, 0.4)	1	0.124 (0.470)	2	0.132 (0.459)	3	0.567 (0.764)	1	0.123 (0.449)	Eval.
(0.7, 0.3)	1	0.145 (0.468)	1	0.151 (0.458)	2	0.576 (0.758)	1	0.151 (0.450)	Eval.
(0.8, 0.2)	1	0.158 (0.467)	1	0.160 (0.458)	2	0.563 (0.741)	1	0.155 (0.449)	Eval.
(0.9, 0.1)	1	0.142 (0.465)	2	0.147 (0.458)	3	0.545 (0.753)	1	0.146 (0.450)	Eval.
(0.1, 0.9)	1	0.153 (0.470)	2	0.155 (0.458)	3	0.546 (0.764)	1	0.151 (0.449)	Time
(0.2, 0.8)	1	0.160 (0.469)	2	0.167 (0.457)	3	0.548 (0.770)	1	0.160 (0.453)	Time
(0.3, 0.7)	1	0.167 (0.461)	1	0.173 (0.453)	1	0.528 (0.767)	1	0.171 (0.449)	Time
(0.4, 0.6)	2	0.176 (0.464)	2	0.182 (0.453)	3	0.526 (0.758)	1	0.180 (0.448)	Time
(0.5, 0.5)	2	0.186 (0.465)	2	0.196 (0.454)	3	0.529 (0.749)	1	0.193 (0.444)	Time
(0.6, 0.4)	1	0.204 (0.467)	1	0.212 (0.453)	1	0.535 (0.732)	1	0.207 (0.441)	Time
(0.7, 0.3)	1	0.207 (0.467)	1	0.214 (0.452)	2	0.539 (0.716)	1	0.205 (0.437)	Time
(0.8, 0.2)	1	0.198 (0.468)	1	0.206 (0.453)	2	0.545 (0.731)	1	0.199 (0.437)	Time
(0.9, 0.1)	1	0.187 (0.467)	1	0.195 (0.453)	2	0.551 (0.753)	1	0.191 (0.436)	Time

Table 60. SA on 10As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.194 (0.467)	2	0.202 (0.453)	2	0.535 (0.750)	1	0.182 (0.418)	Eval.
(0.2, 0.8)	2	0.199 (0.465)	2	0.206 (0.455)	2	0.518 (0.751)	1	0.172 (0.399)	Eval.
(0.3, 0.7)	2	0.204 (0.466)	2	0.209 (0.456)	3	0.505 (0.751)	1	0.166 (0.386)	Eval.
(0.4, 0.6)	2	0.213 (0.465)	2	0.216 (0.455)	3	0.514 (0.750)	1	0.162 (0.373)	Eval.
(0.5, 0.5)	2	0.221 (0.467)	2	0.227 (0.453)	3	0.535 (0.741)	1	0.160 (0.370)	Eval.
(0.6, 0.4)	2	0.232 (0.467)	2	0.237 (0.453)	3	0.555 (0.730)	1	0.160 (0.367)	Eval.
(0.7, 0.3)	1	0.236 (0.467)	1	0.243 (0.453)	1	0.553 (0.720)	1	0.157 (0.366)	Eval.
(0.8, 0.2)	2	0.229 (0.466)	3	0.236 (0.453)	4	0.540 (0.719)	1	0.151 (0.364)	Eval.
(0.9, 0.1)	2	0.223 (0.466)	2	0.228 (0.451)	3	0.526 (0.738)	1	0.146 (0.363)	Eval.
(0.1, 0.9)	2	0.222 (0.464)	2	0.229 (0.455)	3	0.531 (0.738)	1	0.137 (0.354)	Time
(0.2, 0.8)	1	0.225 (0.462)	2	0.231 (0.453)	3	0.534 (0.735)	1	0.132 (0.342)	Time
(0.3, 0.7)	2	0.230 (0.461)	2	0.234 (0.452)	3	0.538 (0.737)	1	0.129 (0.333)	Time
(0.4, 0.6)	2	0.239 (0.462)	2	0.244 (0.452)	3	0.552 (0.735)	1	0.127 (0.331)	Time
(0.5, 0.5)	1	0.247 (0.461)	1	0.253 (0.447)	1	0.555 (0.734)	1	0.125 (0.329)	Time
(0.6, 0.4)	2	0.252 (0.462)	2	0.257 (0.445)	3	0.560 (0.732)	1	0.125 (0.328)	Time
(0.7, 0.3)	2	0.247 (0.461)	3	0.254 (0.442)	4	0.563 (0.730)	1	0.122 (0.326)	Time
(0.8, 0.2)	2	0.241 (0.459)	3	0.246 (0.444)	4	0.562 (0.731)	1	0.117 (0.325)	Time
(0.9, 0.1)	2	0.235 (0.459)	3	0.241 (0.443)	4	0.552 (0.733)	1	0.113 (0.322)	Time

Table 61. SOGA on 10As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.032 (0.000)	2	0.038 (0.000)	3	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.035 (0.004)	2	0.038 (0.002)	3	1.000 (0.115)	1	0.023 (0.023)	Eval.
(0.3, 0.7)	2	0.035 (0.029)	2	0.038 (0.025)	3	0.885 (0.229)	1	0.023 (0.046)	Eval.
(0.4, 0.6)	1	0.029 (0.026)	1	0.029 (0.024)	3	0.883 (0.235)	2	0.024 (0.047)	Eval.
(0.5, 0.5)	1	0.023 (0.019)	2	0.033 (0.027)	3	0.867 (0.266)	2	0.027 (0.054)	Eval.
(0.6, 0.4)	1	0.033 (0.026)	2	0.043 (0.043)	3	0.867 (0.399)	2	0.054 (0.063)	Eval.
(0.7, 0.3)	2	0.033 (0.029)	2	0.043 (0.043)	3	0.734 (0.532)	1	0.027 (0.063)	Eval.
(0.8, 0.2)	2	0.029 (0.025)	2	0.039 (0.041)	3	0.733 (0.534)	1	0.022 (0.058)	Eval.
(0.9, 0.1)	2	0.032 (0.030)	2	0.044 (0.040)	3	0.693 (0.613)	1	0.006 (0.062)	Eval.
(0.1, 0.9)	2	0.027 (0.026)	2	0.043 (0.036)	3	0.735 (0.662)	1	0.010 (0.058)	Time
(0.2, 0.8)	2	0.027 (0.026)	2	0.037 (0.036)	3	0.735 (0.662)	1	0.009 (0.058)	Time
(0.3, 0.7)	2	0.023 (0.029)	2	0.038 (0.037)	3	0.867 (0.532)	1	0.005 (0.054)	Time
(0.4, 0.6)	1	0.028 (0.026)	1	0.033 (0.027)	3	0.734 (0.532)	2	0.005 (0.054)	Time
(0.5, 0.5)	1	0.023 (0.026)	2	0.038 (0.037)	3	0.734 (0.532)	2	0.027 (0.054)	Time
(0.6, 0.4)	1	0.028 (0.026)	2	0.038 (0.043)	3	0.734 (0.532)	2	0.027 (0.063)	Time
(0.7, 0.3)	2	0.033 (0.029)	2	0.043 (0.041)	3	0.734 (0.532)	1	0.027 (0.063)	Time
(0.8, 0.2)	2	0.032 (0.030)	2	0.044 (0.040)	3	0.693 (0.613)	1	0.006 (0.062)	Time
(0.9, 0.1)	2	0.032 (0.030)	2	0.044 (0.040)	3	0.693 (0.613)	1	0.006 (0.062)	Time

Table 62. HC on 10As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.032 (0.025)	1	0.038 (0.041)	1	0.601 (0.665)	1	0.005 (0.063)	Eval.
(0.2, 0.8)	1	0.033 (0.025)	1	0.043 (0.041)	1	0.734 (0.665)	1	0.027 (0.063)	Eval.
(0.3, 0.7)	2	0.033 (0.025)	1	0.043 (0.041)	2	0.734 (0.665)	2	0.027 (0.063)	Eval.
(0.4, 0.6)	1	0.029 (0.027)	1	0.038 (0.056)	2	0.648 (0.704)	1	0.024 (0.075)	Eval.
(0.5, 0.5)	1	0.029 (0.027)	1	0.038 (0.056)	2	0.648 (0.704)	1	0.024 (0.075)	Eval.
(0.6, 0.4)	1	0.031 (0.258)	1	0.043 (0.149)	2	0.672 (0.589)	1	0.043 (0.197)	Eval.
(0.7, 0.3)	1	0.031 (0.478)	1	0.043 (0.481)	1	0.764 (0.589)	1	0.043 (0.482)	Eval.
(0.8, 0.2)	1	0.031 (0.439)	1	0.043 (0.432)	2	0.647 (0.589)	1	0.043 (0.456)	Eval.
(0.9, 0.1)	2	0.031 (0.408)	3	0.043 (0.394)	4	0.647 (0.707)	1	0.043 (0.410)	Eval.
(0.1, 0.9)	1	0.034 (0.512)	1	0.049 (0.515)	1	0.647 (0.680)	1	0.043 (0.521)	Time
(0.2, 0.8)	2	0.030 (0.540)	2	0.042 (0.514)	2	0.657 (0.647)	1	0.044 (0.528)	Time
(0.3, 0.7)	1	0.025 (0.515)	1	0.035 (0.497)	2	0.552 (0.704)	1	0.037 (0.511)	Time
(0.4, 0.6)	1	0.023 (0.518)	1	0.033 (0.496)	2	0.518 (0.721)	1	0.035 (0.514)	Time
(0.5, 0.5)	1	0.027 (0.515)	1	0.047 (0.499)	2	0.520 (0.720)	1	0.035 (0.520)	Time
(0.6, 0.4)	1	0.027 (0.515)	1	0.048 (0.501)	2	0.550 (0.714)	1	0.049 (0.525)	Time
(0.7, 0.3)	1	0.028 (0.508)	1	0.048 (0.498)	2	0.559 (0.709)	1	0.050 (0.517)	Time
(0.8, 0.2)	1	0.029 (0.506)	1	0.050 (0.499)	2	0.559 (0.700)	1	0.052 (0.518)	Time
(0.9, 0.1)	2	0.029 (0.506)	3	0.051 (0.501)	4	0.574 (0.692)	1	0.053 (0.523)	Time

Table 63. RS on 10As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.083 (0.512)	1	0.096 (0.501)	1	0.533 (0.714)	1	0.068 (0.525)	Eval.
(0.2, 0.8)	1	0.094 (0.515)	1	0.107 (0.508)	1	0.514 (0.732)	1	0.080 (0.523)	Eval.
(0.3, 0.7)	1	0.103 (0.505)	1	0.110 (0.504)	1	0.504 (0.753)	1	0.085 (0.513)	Eval.
(0.4, 0.6)	1	0.116 (0.513)	1	0.116 (0.507)	1	0.504 (0.765)	1	0.102 (0.520)	Eval.
(0.5, 0.5)	1	0.127 (0.527)	1	0.125 (0.523)	2	0.486 (0.770)	1	0.121 (0.520)	Eval.
(0.6, 0.4)	1	0.150 (0.526)	2	0.149 (0.525)	3	0.495 (0.745)	1	0.149 (0.523)	Eval.
(0.7, 0.3)	1	0.173 (0.524)	1	0.171 (0.525)	2	0.503 (0.722)	1	0.174 (0.522)	Eval.
(0.8, 0.2)	1	0.187 (0.520)	1	0.189 (0.516)	2	0.508 (0.707)	1	0.187 (0.517)	Eval.
(0.9, 0.1)	1	0.176 (0.517)	2	0.174 (0.518)	3	0.517 (0.756)	1	0.178 (0.518)	Eval.
(0.1, 0.9)	1	0.182 (0.526)	1	0.184 (0.524)	1	0.495 (0.745)	1	0.183 (0.523)	Time
(0.2, 0.8)	1	0.188 (0.527)	1	0.186 (0.525)	1	0.472 (0.739)	1	0.186 (0.520)	Time
(0.3, 0.7)	1	0.194 (0.529)	1	0.194 (0.527)	1	0.460 (0.736)	1	0.192 (0.520)	Time
(0.4, 0.6)	1	0.197 (0.529)	1	0.202 (0.524)	2	0.489 (0.738)	1	0.197 (0.504)	Time
(0.5, 0.5)	1	0.210 (0.528)	1	0.217 (0.525)	1	0.516 (0.735)	1	0.210 (0.505)	Time
(0.6, 0.4)	1	0.222 (0.526)	1	0.235 (0.523)	2	0.520 (0.733)	1	0.229 (0.504)	Time
(0.7, 0.3)	2	0.231 (0.525)	2	0.243 (0.519)	3	0.524 (0.731)	1	0.234 (0.502)	Time
(0.8, 0.2)	1	0.223 (0.523)	1	0.232 (0.518)	2	0.514 (0.728)	1	0.225 (0.502)	Time
(0.9, 0.1)	1	0.214 (0.518)	2	0.222 (0.515)	3	0.502 (0.726)	1	0.216 (0.500)	Time

Table 64. SA on 10As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.219 (0.526)	1	0.228 (0.523)	1	0.505 (0.733)	1	0.201 (0.482)	Eval.
(0.2, 0.8)	1	0.222 (0.527)	1	0.234 (0.521)	1	0.505 (0.741)	1	0.188 (0.465)	Eval.
(0.3, 0.7)	1	0.227 (0.528)	1	0.236 (0.525)	1	0.491 (0.749)	1	0.171 (0.447)	Eval.
(0.4, 0.6)	2	0.231 (0.528)	2	0.240 (0.524)	2	0.479 (0.755)	1	0.159 (0.430)	Eval.
(0.5, 0.5)	2	0.244 (0.528)	2	0.250 (0.523)	3	0.479 (0.755)	1	0.152 (0.425)	Eval.
(0.6, 0.4)	2	0.256 (0.526)	2	0.259 (0.521)	3	0.483 (0.753)	1	0.148 (0.423)	Eval.
(0.7, 0.3)	2	0.264 (0.527)	2	0.267 (0.523)	3	0.502 (0.751)	1	0.146 (0.420)	Eval.
(0.8, 0.2)	2	0.257 (0.527)	2	0.261 (0.522)	3	0.491 (0.741)	1	0.141 (0.419)	Eval.
(0.9, 0.1)	2	0.250 (0.527)	3	0.255 (0.520)	4	0.495 (0.747)	1	0.135 (0.416)	Eval.
(0.1, 0.9)	2	0.252 (0.525)	2	0.256 (0.511)	2	0.482 (0.753)	1	0.124 (0.403)	Time
(0.2, 0.8)	2	0.254 (0.530)	2	0.257 (0.514)	2	0.486 (0.760)	1	0.112 (0.393)	Time
(0.3, 0.7)	2	0.260 (0.527)	2	0.259 (0.515)	2	0.495 (0.758)	1	0.104 (0.380)	Time
(0.4, 0.6)	2	0.268 (0.527)	2	0.266 (0.514)	3	0.512 (0.748)	1	0.099 (0.375)	Time
(0.5, 0.5)	2	0.278 (0.528)	2	0.277 (0.512)	3	0.530 (0.742)	1	0.096 (0.371)	Time
(0.6, 0.4)	2	0.285 (0.528)	3	0.285 (0.512)	4	0.543 (0.730)	1	0.093 (0.368)	Time
(0.7, 0.3)	2	0.281 (0.527)	2	0.280 (0.512)	3	0.535 (0.723)	1	0.092 (0.366)	Time
(0.8, 0.2)	2	0.275 (0.525)	2	0.274 (0.512)	3	0.524 (0.723)	1	0.089 (0.364)	Time
(0.9, 0.1)	2	0.270 (0.524)	3	0.270 (0.511)	4	0.513 (0.738)	1	0.084 (0.364)	Time

Table 65. SOGA on 15AS-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.125 (0.125)	2	0.125 (0.125)	3	1.000 (0.125)	1	0.014 (0.014)	Eval.
(0.3, 0.7)	2	0.125 (0.250)	2	0.125 (0.250)	3	0.875 (0.250)	1	0.014 (0.066)	Eval.
(0.4, 0.6)	2	0.239 (0.254)	2	0.239 (0.254)	3	0.873 (0.254)	1	0.038 (0.046)	Eval.
(0.5, 0.5)	2	0.274 (0.290)	2	0.274 (0.290)	2	0.855 (0.290)	1	0.043 (0.060)	Eval.
(0.6, 0.4)	3	0.419 (0.436)	3	0.419 (0.436)	2	0.855 (0.436)	1	0.043 (0.060)	Eval.
(0.7, 0.3)	3	0.422 (0.578)	3	0.422 (0.578)	2	0.711 (0.578)	1	0.035 (0.064)	Eval.
(0.8, 0.2)	3	0.566 (0.579)	3	0.566 (0.579)	2	0.710 (0.579)	1	0.018 (0.056)	Eval.
(0.9, 0.1)	3	0.661 (0.677)	3	0.661 (0.677)	1	0.661 (0.677)	2	0.003 (0.054)	Eval.
(0.1, 0.9)	1	0.566 (0.723)	1	0.566 (0.723)	2	0.711 (0.723)	1	0.004 (0.048)	Time
(0.2, 0.8)	2	0.422 (0.723)	2	0.422 (0.723)	3	0.711 (0.723)	1	0.004 (0.048)	Time
(0.3, 0.7)	2	0.421 (0.724)	2	0.421 (0.724)	3	0.855 (0.579)	1	0.002 (0.056)	Time
(0.4, 0.6)	2	0.421 (0.579)	2	0.421 (0.579)	3	0.710 (0.579)	1	0.002 (0.046)	Time
(0.5, 0.5)	2	0.421 (0.579)	2	0.421 (0.579)	2	0.710 (0.579)	1	0.018 (0.063)	Time
(0.6, 0.4)	3	0.421 (0.579)	3	0.421 (0.579)	2	0.710 (0.579)	1	0.033 (0.063)	Time
(0.7, 0.3)	3	0.566 (0.579)	3	0.566 (0.579)	2	0.710 (0.579)	1	0.018 (0.056)	Time
(0.8, 0.2)	3	0.661 (0.677)	3	0.661 (0.677)	2	0.661 (0.677)	1	0.003 (0.054)	Time
(0.9, 0.1)	3	0.661 (0.677)	3	0.661 (0.677)	1	0.661 (0.677)	2	0.003 (0.054)	Time

Table 66. HC on 15AS-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.566 (0.724)	1	0.566 (0.724)	1	0.566 (0.724)	1	0.002 (0.063)	Eval.
(0.2, 0.8)	1	0.710 (0.724)	1	0.710 (0.724)	1	0.710 (0.724)	1	0.018 (0.063)	Eval.
(0.3, 0.7)	1	0.710 (0.724)	1	0.710 (0.724)	1	0.710 (0.724)	1	0.033 (0.063)	Eval.
(0.4, 0.6)	1	0.620 (0.759)	1	0.620 (0.759)	1	0.620 (0.759)	1	0.029 (0.071)	Eval.
(0.5, 0.5)	1	0.620 (0.759)	1	0.620 (0.759)	1	0.620 (0.759)	1	0.029 (0.071)	Eval.
(0.6, 0.4)	1	0.624 (0.634)	1	0.624 (0.634)	2	0.679 (0.634)	1	0.038 (0.490)	Eval.
(0.7, 0.3)	1	0.687 (0.601)	1	0.689 (0.601)	2	0.708 (0.653)	1	0.036 (0.697)	Eval.
(0.8, 0.2)	2	0.636 (0.634)	2	0.654 (0.634)	2	0.746 (0.634)	1	0.038 (0.689)	Eval.
(0.9, 0.1)	1	0.620 (0.727)	2	0.620 (0.634)	1	0.620 (0.719)	1	0.038 (0.635)	Eval.
(0.1, 0.9)	1	0.549 (0.553)	1	0.608 (0.545)	1	0.642 (0.685)	1	0.040 (0.692)	Time
(0.2, 0.8)	1	0.537 (0.511)	1	0.537 (0.509)	1	0.537 (0.737)	1	0.038 (0.723)	Time
(0.3, 0.7)	1	0.454 (0.509)	1	0.454 (0.500)	1	0.454 (0.777)	1	0.032 (0.695)	Time
(0.4, 0.6)	1	0.414 (0.495)	1	0.414 (0.495)	1	0.414 (0.797)	1	0.029 (0.658)	Time
(0.5, 0.5)	1	0.409 (0.503)	1	0.409 (0.500)	1	0.414 (0.800)	1	0.038 (0.665)	Time
(0.6, 0.4)	2	0.419 (0.499)	2	0.430 (0.510)	3	0.490 (0.795)	1	0.038 (0.665)	Time
(0.7, 0.3)	1	0.427 (0.503)	2	0.437 (0.512)	2	0.499 (0.791)	1	0.039 (0.667)	Time
(0.8, 0.2)	2	0.438 (0.510)	2	0.438 (0.513)	2	0.478 (0.785)	1	0.040 (0.671)	Time
(0.9, 0.1)	2	0.452 (0.517)	3	0.452 (0.520)	2	0.452 (0.778)	1	0.045 (0.677)	Time



Table 67. RS on 15As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.419 (0.519)	1	0.419 (0.518)	1	0.457 (0.795)	1	0.090 (0.665)	Eval.
(0.2, 0.8)	1	0.391 (0.514)	1	0.409 (0.506)	1	0.454 (0.810)	1	0.104 (0.661)	Eval.
(0.3, 0.7)	1	0.401 (0.523)	1	0.406 (0.496)	1	0.425 (0.822)	1	0.121 (0.654)	Eval.
(0.4, 0.6)	1	0.399 (0.538)	1	0.399 (0.488)	1	0.399 (0.824)	1	0.132 (0.660)	Eval.
(0.5, 0.5)	1	0.376 (0.529)	1	0.376 (0.484)	1	0.376 (0.812)	1	0.153 (0.665)	Eval.
(0.6, 0.4)	1	0.369 (0.504)	1	0.369 (0.472)	1	0.386 (0.800)	1	0.173 (0.657)	Eval.
(0.7, 0.3)	1	0.375 (0.491)	1	0.375 (0.467)	2	0.431 (0.794)	1	0.205 (0.659)	Eval.
(0.8, 0.2)	1	0.378 (0.480)	1	0.378 (0.467)	2	0.434 (0.792)	1	0.231 (0.653)	Eval.
(0.9, 0.1)	1	0.384 (0.499)	1	0.384 (0.475)	1	0.436 (0.789)	1	0.210 (0.654)	Eval.
(0.1, 0.9)	1	0.369 (0.494)	1	0.369 (0.475)	1	0.424 (0.797)	1	0.226 (0.657)	Time
(0.2, 0.8)	1	0.352 (0.497)	1	0.352 (0.475)	1	0.405 (0.806)	1	0.243 (0.652)	Time
(0.3, 0.7)	1	0.347 (0.506)	1	0.349 (0.488)	1	0.387 (0.817)	1	0.249 (0.656)	Time
(0.4, 0.6)	1	0.351 (0.498)	1	0.357 (0.488)	1	0.372 (0.824)	1	0.252 (0.656)	Time
(0.5, 0.5)	1	0.374 (0.497)	1	0.375 (0.486)	1	0.399 (0.823)	1	0.267 (0.655)	Time
(0.6, 0.4)	1	0.380 (0.501)	1	0.380 (0.488)	1	0.422 (0.820)	1	0.281 (0.657)	Time
(0.7, 0.3)	1	0.383 (0.502)	1	0.383 (0.488)	2	0.451 (0.819)	1	0.297 (0.655)	Time
(0.8, 0.2)	1	0.385 (0.502)	1	0.387 (0.484)	1	0.430 (0.815)	1	0.288 (0.653)	Time
(0.9, 0.1)	2	0.374 (0.501)	2	0.377 (0.483)	2	0.416 (0.815)	1	0.279 (0.652)	Time

Table 68. SA on 15As-1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.380 (0.502)	1	0.380 (0.489)	1	0.422 (0.820)	1	0.268 (0.624)	Eval.
(0.2, 0.8)	1	0.363 (0.501)	1	0.363 (0.492)	1	0.427 (0.828)	1	0.253 (0.590)	Eval.
(0.3, 0.7)	1	0.346 (0.501)	1	0.346 (0.496)	1	0.427 (0.837)	1	0.236 (0.558)	Eval.
(0.4, 0.6)	1	0.332 (0.497)	1	0.332 (0.492)	1	0.431 (0.840)	1	0.224 (0.530)	Eval.
(0.5, 0.5)	1	0.325 (0.487)	1	0.326 (0.484)	1	0.442 (0.833)	1	0.217 (0.513)	Eval.
(0.6, 0.4)	1	0.341 (0.482)	1	0.344 (0.478)	1	0.465 (0.823)	1	0.217 (0.513)	Eval.
(0.7, 0.3)	2	0.351 (0.474)	2	0.355 (0.471)	2	0.487 (0.807)	1	0.216 (0.516)	Eval.
(0.8, 0.2)	2	0.347 (0.469)	2	0.350 (0.465)	3	0.476 (0.800)	1	0.211 (0.515)	Eval.
(0.9, 0.1)	2	0.341 (0.484)	2	0.345 (0.475)	2	0.462 (0.819)	1	0.206 (0.513)	Eval.
(0.1, 0.9)	1	0.342 (0.475)	1	0.345 (0.472)	1	0.466 (0.816)	1	0.197 (0.490)	Time
(0.2, 0.8)	1	0.342 (0.475)	1	0.348 (0.468)	1	0.469 (0.813)	1	0.191 (0.470)	Time
(0.3, 0.7)	1	0.340 (0.474)	1	0.345 (0.468)	1	0.470 (0.817)	1	0.182 (0.453)	Time
(0.4, 0.6)	2	0.346 (0.464)	2	0.350 (0.463)	2	0.480 (0.819)	1	0.178 (0.443)	Time
(0.5, 0.5)	1	0.358 (0.459)	1	0.358 (0.456)	1	0.504 (0.818)	1	0.178 (0.438)	Time
(0.6, 0.4)	2	0.365 (0.457)	2	0.368 (0.456)	2	0.522 (0.817)	1	0.176 (0.436)	Time
(0.7, 0.3)	2	0.364 (0.457)	2	0.364 (0.455)	3	0.513 (0.815)	1	0.173 (0.431)	Time
(0.8, 0.2)	2	0.360 (0.457)	2	0.363 (0.453)	2	0.505 (0.814)	1	0.170 (0.430)	Time
(0.9, 0.1)	2	0.356 (0.462)	2	0.360 (0.456)	2	0.493 (0.813)	1	0.165 (0.426)	Time

Table 69. SOGA on 15As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	1	0.010 (0.010)	1	0.010 (0.010)	2	1.000 (0.112)	1	0.010 (0.010)	Eval.
(0.3, 0.7)	1	0.010 (0.021)	1	0.010 (0.021)	2	0.888 (0.225)	1	0.010 (0.021)	Eval.
(0.4, 0.6)	1	0.011 (0.021)	1	0.011 (0.021)	2	0.886 (0.227)	1	0.011 (0.021)	Eval.
(0.5, 0.5)	1	0.012 (0.024)	2	0.012 (0.024)	3	0.872 (0.256)	1	0.012 (0.024)	Eval.
(0.6, 0.4)	2	0.024 (0.036)	3	0.024 (0.488)	3	0.872 (0.384)	1	0.024 (0.036)	Eval.
(0.7, 0.3)	2	0.024 (0.360)	2	0.024 (0.488)	2	0.744 (0.512)	1	0.024 (0.048)	Eval.
(0.8, 0.2)	2	0.024 (0.340)	2	0.223 (0.482)	2	0.741 (0.518)	1	0.024 (0.048)	Eval.
(0.9, 0.1)	2	0.028 (0.256)	2	0.107 (0.405)	2	0.702 (0.595)	1	0.028 (0.055)	Eval.
(0.1, 0.9)	1	0.036 (0.232)	1	0.104 (0.360)	2	0.744 (0.640)	1	0.036 (0.059)	Time
(0.2, 0.8)	1	0.024 (0.232)	1	0.024 (0.360)	2	0.744 (0.640)	1	0.024 (0.059)	Time
(0.3, 0.7)	1	0.024 (0.232)	1	0.024 (0.360)	2	0.872 (0.512)	1	0.024 (0.059)	Time
(0.4, 0.6)	1	0.024 (0.104)	1	0.024 (0.232)	2	0.744 (0.512)	1	0.024 (0.048)	Time
(0.5, 0.5)	1	0.024 (0.104)	2	0.024 (0.360)	3	0.744 (0.512)	1	0.024 (0.048)	Time
(0.6, 0.4)	2	0.024 (0.232)	3	0.024 (0.488)	3	0.744 (0.512)	1	0.024 (0.048)	Time
(0.7, 0.3)	2	0.024 (0.340)	2	0.093 (0.482)	2	0.741 (0.518)	1	0.024 (0.048)	Time
(0.8, 0.2)	2	0.028 (0.256)	2	0.107 (0.405)	2	0.702 (0.595)	1	0.028 (0.055)	Time
(0.9, 0.1)	2	0.028 (0.256)	2	0.107 (0.405)	2	0.702 (0.595)	1	0.028 (0.055)	Time

Table 70. HC on 15As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.024 (0.352)	1	0.093 (0.482)	1	0.611 (0.648)	1	0.024 (0.060)	Eval.
(0.2, 0.8)	1	0.093 (0.352)	1	0.223 (0.482)	1	0.741 (0.648)	1	0.036 (0.060)	Eval.
(0.3, 0.7)	1	0.093 (0.352)	1	0.223 (0.482)	1	0.741 (0.648)	1	0.036 (0.060)	Eval.
(0.4, 0.6)	1	0.082 (0.411)	1	0.197 (0.521)	1	0.656 (0.688)	1	0.032 (0.064)	Eval.
(0.5, 0.5)	1	0.082 (0.411)	1	0.197 (0.521)	1	0.656 (0.688)	1	0.032 (0.064)	Eval.
(0.6, 0.4)	1	0.187 (0.737)	1	0.302 (0.682)	1	0.746 (0.582)	1	0.032 (0.599)	Eval.
(0.7, 0.3)	1	0.170 (0.902)	1	0.275 (0.927)	1	0.694 (0.620)	1	0.029 (0.875)	Eval.
(0.8, 0.2)	1	0.182 (0.898)	1	0.294 (0.941)	1	0.743 (0.593)	1	0.031 (0.909)	Eval.
(0.9, 0.1)	1	0.188 (0.864)	1	0.304 (0.899)	1	0.671 (0.641)	2	0.032 (0.860)	Eval.
(0.1, 0.9)	1	0.162 (0.888)	1	0.256 (0.939)	1	0.647 (0.646)	1	0.036 (0.888)	Time
(0.2, 0.8)	1	0.214 (0.856)	1	0.216 (0.909)	1	0.545 (0.702)	1	0.031 (0.868)	Time
(0.3, 0.7)	1	0.180 (0.804)	1	0.249 (0.832)	1	0.454 (0.751)	1	0.025 (0.807)	Time
(0.4, 0.6)	1	0.168 (0.801)	1	0.232 (0.828)	1	0.424 (0.768)	1	0.024 (0.798)	Time
(0.5, 0.5)	1	0.160 (0.802)	1	0.223 (0.799)	1	0.451 (0.777)	1	0.023 (0.800)	Time
(0.6, 0.4)	1	0.165 (0.801)	1	0.228 (0.804)	1	0.487 (0.772)	1	0.024 (0.814)	Time
(0.7, 0.3)	1	0.226 (0.804)	1	0.252 (0.815)	2	0.501 (0.765)	1	0.025 (0.824)	Time
(0.8, 0.2)	1	0.230 (0.797)	1	0.295 (0.813)	1	0.509 (0.761)	1	0.025 (0.822)	Time
(0.9, 0.1)	1	0.236 (0.804)	1	0.258 (0.818)	1	0.495 (0.755)	2	0.081 (0.827)	Time

Table 71. RS on 15As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.220 (0.801)	1	0.282 (0.804)	1	0.487 (0.772)	1	0.152 (0.814)	Eval.
(0.2, 0.8)	1	0.203 (0.795)	1	0.260 (0.784)	1	0.450 (0.789)	1	0.163 (0.786)	Eval.
(0.3, 0.7)	1	0.191 (0.790)	1	0.245 (0.773)	1	0.423 (0.801)	1	0.176 (0.768)	Eval.
(0.4, 0.6)	1	0.184 (0.742)	1	0.224 (0.722)	1	0.391 (0.804)	1	0.197 (0.744)	Eval.
(0.5, 0.5)	1	0.230 (0.727)	1	0.229 (0.696)	1	0.385 (0.785)	1	0.226 (0.731)	Eval.
(0.6, 0.4)	1	0.261 (0.731)	1	0.259 (0.703)	1	0.419 (0.780)	1	0.252 (0.736)	Eval.
(0.7, 0.3)	1	0.289 (0.735)	1	0.284 (0.707)	1	0.426 (0.776)	1	0.289 (0.738)	Eval.
(0.8, 0.2)	1	0.323 (0.736)	1	0.322 (0.708)	2	0.431 (0.773)	1	0.318 (0.741)	Eval.
(0.9, 0.1)	2	0.296 (0.741)	2	0.292 (0.712)	3	0.438 (0.770)	1	0.297 (0.742)	Eval.
(0.1, 0.9)	1	0.313 (0.731)	1	0.312 (0.703)	1	0.419 (0.780)	1	0.309 (0.738)	Time
(0.2, 0.8)	1	0.323 (0.730)	1	0.337 (0.700)	1	0.402 (0.789)	1	0.316 (0.734)	Time
(0.3, 0.7)	1	0.328 (0.704)	1	0.345 (0.704)	1	0.386 (0.801)	1	0.318 (0.730)	Time
(0.4, 0.6)	1	0.329 (0.674)	1	0.347 (0.670)	1	0.389 (0.809)	1	0.322 (0.718)	Time
(0.5, 0.5)	1	0.344 (0.678)	1	0.366 (0.668)	1	0.408 (0.808)	1	0.349 (0.725)	Time
(0.6, 0.4)	1	0.365 (0.680)	1	0.386 (0.665)	1	0.433 (0.804)	1	0.372 (0.726)	Time
(0.7, 0.3)	2	0.382 (0.680)	2	0.408 (0.659)	2	0.453 (0.797)	1	0.388 (0.726)	Time
(0.8, 0.2)	1	0.371 (0.681)	1	0.392 (0.657)	1	0.442 (0.789)	1	0.380 (0.729)	Time
(0.9, 0.1)	1	0.359 (0.679)	1	0.382 (0.657)	2	0.426 (0.799)	1	0.371 (0.729)	Time

Table 72. SA on 15As-2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.364 (0.680)	2	0.384 (0.655)	2	0.433 (0.804)	1	0.341 (0.698)	Eval.
(0.2, 0.8)	1	0.365 (0.674)	1	0.390 (0.653)	1	0.433 (0.806)	1	0.312 (0.667)	Eval.
(0.3, 0.7)	1	0.372 (0.657)	1	0.395 (0.650)	1	0.443 (0.806)	1	0.291 (0.642)	Eval.
(0.4, 0.6)	2	0.372 (0.650)	2	0.398 (0.650)	2	0.450 (0.805)	1	0.272 (0.614)	Eval.
(0.5, 0.5)	2	0.379 (0.640)	2	0.407 (0.651)	2	0.463 (0.798)	1	0.263 (0.600)	Eval.
(0.6, 0.4)	2	0.396 (0.634)	2	0.426 (0.652)	2	0.487 (0.787)	1	0.263 (0.600)	Eval.
(0.7, 0.3)	2	0.407 (0.632)	2	0.438 (0.649)	2	0.509 (0.785)	1	0.261 (0.600)	Eval.
(0.8, 0.2)	1	0.402 (0.632)	1	0.430 (0.641)	2	0.494 (0.783)	1	0.258 (0.598)	Eval.
(0.9, 0.1)	2	0.391 (0.631)	3	0.419 (0.632)	4	0.480 (0.785)	1	0.254 (0.598)	Eval.
(0.1, 0.9)	1	0.394 (0.631)	1	0.422 (0.627)	1	0.485 (0.787)	1	0.239 (0.577)	Time
(0.2, 0.8)	2	0.395 (0.634)	2	0.424 (0.621)	2	0.494 (0.791)	1	0.227 (0.560)	Time
(0.3, 0.7)	2	0.394 (0.639)	2	0.423 (0.626)	2	0.498 (0.796)	1	0.216 (0.544)	Time
(0.4, 0.6)	1	0.401 (0.638)	1	0.427 (0.624)	1	0.504 (0.798)	1	0.212 (0.533)	Time
(0.5, 0.5)	2	0.413 (0.638)	2	0.439 (0.624)	2	0.519 (0.799)	1	0.208 (0.530)	Time
(0.6, 0.4)	2	0.424 (0.635)	2	0.449 (0.620)	2	0.539 (0.798)	1	0.208 (0.528)	Time
(0.7, 0.3)	2	0.421 (0.628)	2	0.446 (0.618)	2	0.530 (0.796)	1	0.206 (0.527)	Time
(0.8, 0.2)	1	0.415 (0.618)	1	0.440 (0.615)	1	0.522 (0.795)	1	0.201 (0.526)	Time
(0.9, 0.1)	2	0.408 (0.609)	2	0.435 (0.614)	3	0.515 (0.794)	1	0.195 (0.525)	Time

Table 73. SOGA on 15As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.2, 0.8)	2	0.125 (0.355)	2	0.355 (0.355)	3	1.000 (0.125)	1	0.125 (0.125)	Eval.
(0.3, 0.7)	2	0.340 (0.355)	2	0.341 (0.355)	3	0.875 (0.250)	1	0.125 (0.250)	Eval.
(0.4, 0.6)	1	0.238 (0.253)	3	0.263 (0.325)	3	0.857 (0.286)	2	0.143 (0.286)	Eval.
(0.5, 0.5)	1	0.286 (0.040)	1	0.306 (0.213)	1	0.833 (0.333)	1	0.167 (0.333)	Eval.
(0.6, 0.4)	1	0.295 (0.067)	1	0.333 (0.213)	1	0.833 (0.500)	2	0.333 (0.500)	Eval.
(0.7, 0.3)	1	0.286 (0.167)	1	0.306 (0.333)	1	0.667 (0.667)	2	0.333 (0.667)	Eval.
(0.8, 0.2)	1	0.274 (0.329)	1	0.302 (0.335)	1	0.665 (0.671)	2	0.329 (0.503)	Eval.
(0.9, 0.1)	1	0.320 (0.368)	1	0.345 (0.400)	1	0.600 (0.800)	2	0.221 (0.406)	Eval.
(0.1, 0.9)	1	0.292 (0.405)	1	0.389 (0.429)	2	0.714 (0.714)	1	0.300 (0.429)	Time
(0.2, 0.8)	2	0.371 (0.405)	2	0.389 (0.429)	3	0.714 (0.714)	1	0.286 (0.429)	Time
(0.3, 0.7)	2	0.278 (0.306)	2	0.287 (0.333)	3	0.833 (0.667)	1	0.167 (0.500)	Time
(0.4, 0.6)	1	0.267 (0.306)	3	0.287 (0.333)	3	0.667 (0.667)	2	0.167 (0.333)	Time
(0.5, 0.5)	1	0.278 (0.306)	1	0.306 (0.500)	1	0.667 (0.667)	1	0.183 (0.500)	Time
(0.6, 0.4)	1	0.286 (0.333)	1	0.306 (0.500)	1	0.667 (0.667)	2	0.184 (0.500)	Time
(0.7, 0.3)	1	0.274 (0.329)	1	0.302 (0.335)	1	0.665 (0.671)	2	0.329 (0.508)	Time
(0.8, 0.2)	1	0.320 (0.368)	1	0.345 (0.400)	1	0.600 (0.800)	2	0.221 (0.406)	Time
(0.9, 0.1)	1	0.320 (0.368)	1	0.345 (0.400)	1	0.600 (0.800)	2	0.221 (0.406)	Time

Table 74. HC on 15As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.267 (0.333)	1	0.287 (0.500)	1	0.500 (0.833)	1	0.184 (0.505)	Eval.
(0.2, 0.8)	1	0.278 (0.333)	1	0.306 (0.500)	1	0.667 (0.833)	1	0.333 (0.505)	Eval.
(0.3, 0.7)	1	0.286 (0.333)	1	0.306 (0.500)	1	0.667 (0.833)	1	0.333 (0.505)	Eval.
(0.4, 0.6)	1	0.245 (0.429)	1	0.263 (0.571)	1	0.571 (0.857)	1	0.286 (0.576)	Eval.
(0.5, 0.5)	1	0.245 (0.429)	1	0.263 (0.571)	1	0.571 (0.857)	1	0.286 (0.576)	Eval.
(0.6, 0.4)	1	0.241 (0.629)	1	0.282 (0.566)	1	0.660 (0.718)	1	0.426 (0.576)	Eval.
(0.7, 0.3)	1	0.138 (0.894)	1	0.165 (0.874)	1	0.660 (0.825)	2	0.330 (1.000)	Eval.
(0.8, 0.2)	1	0.140 (0.800)	1	0.167 (0.806)	1	0.606 (0.833)	1	0.333 (0.929)	Eval.
(0.9, 0.1)	2	0.140 (0.718)	1	0.167 (0.698)	1	0.500 (0.983)	3	0.333 (0.828)	Eval.
(0.1, 0.9)	1	0.127 (0.889)	1	0.152 (0.872)	1	0.552 (0.802)	1	0.304 (1.000)	Time
(0.2, 0.8)	1	0.104 (0.873)	1	0.124 (0.866)	1	0.496 (0.876)	1	0.248 (0.972)	Time
(0.3, 0.7)	1	0.101 (0.819)	1	0.105 (0.811)	1	0.403 (0.899)	1	0.202 (0.872)	Time
(0.4, 0.6)	1	0.092 (0.801)	1	0.184 (0.794)	1	0.368 (0.908)	1	0.276 (0.840)	Time
(0.5, 0.5)	1	0.091 (0.812)	1	0.181 (0.810)	1	0.363 (0.909)	1	0.272 (0.846)	Time
(0.6, 0.4)	1	0.093 (0.820)	1	0.185 (0.820)	1	0.445 (0.907)	1	0.278 (0.850)	Time
(0.7, 0.3)	1	0.114 (0.824)	1	0.191 (0.824)	1	0.460 (0.905)	2	0.286 (0.865)	Time
(0.8, 0.2)	1	0.188 (0.792)	1	0.188 (0.819)	1	0.403 (0.911)	1	0.287 (0.883)	Time
(0.9, 0.1)	2	0.117 (0.833)	1	0.202 (0.833)	2	0.404 (0.899)	3	0.303 (0.884)	Time

Table 75. RS on 15As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.185 (0.816)	1	0.185 (0.820)	1	0.386 (0.907)	1	0.278 (0.851)	Eval.
(0.2, 0.8)	1	0.168 (0.782)	1	0.212 (0.808)	1	0.410 (0.917)	1	0.269 (0.841)	Eval.
(0.3, 0.7)	1	0.151 (0.756)	1	0.222 (0.772)	1	0.389 (0.929)	1	0.288 (0.824)	Eval.
(0.4, 0.6)	1	0.139 (0.732)	1	0.213 (0.739)	1	0.360 (0.934)	1	0.287 (0.805)	Eval.
(0.5, 0.5)	1	0.113 (0.733)	1	0.179 (0.739)	1	0.318 (0.935)	1	0.248 (0.780)	Eval.
(0.6, 0.4)	1	0.131 (0.733)	1	0.161 (0.735)	1	0.296 (0.928)	1	0.228 (0.764)	Eval.
(0.7, 0.3)	1	0.168 (0.730)	1	0.164 (0.736)	1	0.332 (0.905)	1	0.232 (0.753)	Eval.
(0.8, 0.2)	1	0.209 (0.742)	2	0.201 (0.747)	2	0.371 (0.902)	2	0.261 (0.754)	Eval.
(0.9, 0.1)	1	0.176 (0.743)	1	0.172 (0.747)	1	0.343 (0.908)	2	0.243 (0.759)	Eval.
(0.1, 0.9)	1	0.201 (0.733)	1	0.193 (0.737)	1	0.355 (0.906)	1	0.254 (0.743)	Time
(0.2, 0.8)	1	0.222 (0.723)	1	0.216 (0.730)	1	0.342 (0.911)	1	0.266 (0.734)	Time
(0.3, 0.7)	1	0.237 (0.719)	1	0.237 (0.736)	1	0.322 (0.922)	1	0.272 (0.740)	Time
(0.4, 0.6)	1	0.250 (0.717)	1	0.248 (0.730)	1	0.307 (0.925)	1	0.283 (0.736)	Time
(0.5, 0.5)	1	0.264 (0.718)	1	0.269 (0.734)	1	0.304 (0.926)	1	0.302 (0.735)	Time
(0.6, 0.4)	1	0.282 (0.714)	1	0.292 (0.729)	1	0.324 (0.925)	1	0.328 (0.737)	Time
(0.7, 0.3)	1	0.303 (0.715)	1	0.315 (0.726)	1	0.346 (0.925)	1	0.346 (0.736)	Time
(0.8, 0.2)	1	0.290 (0.715)	1	0.301 (0.728)	1	0.331 (0.924)	1	0.340 (0.730)	Time
(0.9, 0.1)	1	0.279 (0.716)	1	0.289 (0.730)	1	0.321 (0.923)	2	0.325 (0.730)	Time

Table 76. SA on 15As-3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.283 (0.714)	1	0.294 (0.729)	1	0.324 (0.925)	1	0.297 (0.697)	Eval.
(0.2, 0.8)	1	0.289 (0.716)	1	0.301 (0.730)	1	0.330 (0.928)	1	0.272 (0.670)	Eval.
(0.3, 0.7)	2	0.288 (0.716)	2	0.304 (0.733)	2	0.338 (0.937)	1	0.249 (0.643)	Eval.
(0.4, 0.6)	2	0.287 (0.708)	2	0.304 (0.716)	2	0.340 (0.938)	1	0.229 (0.597)	Eval.
(0.5, 0.5)	2	0.294 (0.704)	2	0.307 (0.708)	2	0.358 (0.933)	1	0.225 (0.568)	Eval.
(0.6, 0.4)	2	0.314 (0.703)	2	0.324 (0.708)	2	0.381 (0.925)	1	0.227 (0.563)	Eval.
(0.7, 0.3)	2	0.333 (0.708)	2	0.344 (0.712)	2	0.412 (0.915)	1	0.227 (0.559)	Eval.
(0.8, 0.2)	1	0.323 (0.708)	2	0.336 (0.714)	3	0.399 (0.895)	1	0.223 (0.557)	Eval.
(0.9, 0.1)	2	0.312 (0.706)	3	0.330 (0.718)	3	0.383 (0.921)	1	0.216 (0.566)	Eval.
(0.1, 0.9)	2	0.314 (0.703)	2	0.327 (0.708)	2	0.387 (0.918)	1	0.198 (0.539)	Time
(0.2, 0.8)	1	0.312 (0.701)	1	0.325 (0.712)	1	0.392 (0.917)	1	0.180 (0.523)	Time
(0.3, 0.7)	2	0.313 (0.695)	2	0.325 (0.707)	2	0.396 (0.910)	1	0.171 (0.499)	Time
(0.4, 0.6)	2	0.318 (0.685)	2	0.330 (0.697)	2	0.404 (0.907)	1	0.167 (0.482)	Time
(0.5, 0.5)	2	0.334 (0.689)	2	0.344 (0.696)	2	0.424 (0.906)	1	0.171 (0.479)	Time
(0.6, 0.4)	2	0.346 (0.692)	2	0.358 (0.694)	2	0.445 (0.905)	1	0.176 (0.473)	Time
(0.7, 0.3)	2	0.346 (0.694)	2	0.359 (0.690)	2	0.449 (0.904)	1	0.177 (0.468)	Time
(0.8, 0.2)	1	0.342 (0.697)	1	0.355 (0.686)	1	0.441 (0.902)	1	0.174 (0.467)	Time
(0.9, 0.1)	2	0.335 (0.695)	2	0.349 (0.693)	2	0.432 (0.902)	1	0.170 (0.472)	Time

Table 77. SOGA on 50As for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.068 (0.020)	1	0.066 (0.024)	1	0.983 (0.031)	1	0.011 (0.028)	Eval.
(0.2, 0.8)	1	0.112 (0.021)	1	0.112 (0.023)	1	0.986 (0.211)	1	0.038 (0.051)	Eval.
(0.3, 0.7)	1	0.153 (0.029)	1	0.153 (0.027)	1	0.807 (0.379)	1	0.032 (0.068)	Eval.
(0.4, 0.6)	1	0.196 (0.038)	1	0.196 (0.038)	1	0.808 (0.384)	1	0.064 (0.107)	Eval.
(0.5, 0.5)	2	0.309 (0.058)	2	0.313 (0.056)	2	0.773 (0.447)	1	0.114 (0.181)	Eval.
(0.6, 0.4)	1	0.366 (0.060)	1	0.346 (0.064)	1	0.791 (0.609)	1	0.139 (0.216)	Eval.
(0.7, 0.3)	1	0.441 (0.061)	1	0.410 (0.306)	1	0.643 (0.718)	1	0.165 (0.293)	Eval.
(0.8, 0.2)	3	0.453 (0.071)	3	0.419 (0.301)	2	0.647 (0.707)	1	0.186 (0.314)	Eval.
(0.9, 0.1)	2	0.565 (0.218)	2	0.531 (0.369)	1	0.602 (0.788)	1	0.231 (0.404)	Eval.
(0.1, 0.9)	2	0.473 (0.068)	2	0.441 (0.308)	3	0.668 (0.821)	1	0.241 (0.367)	Time
(0.2, 0.8)	2	0.462 (0.064)	2	0.449 (0.302)	3	0.677 (0.820)	1	0.245 (0.361)	Time
(0.3, 0.7)	2	0.436 (0.068)	2	0.419 (0.283)	3	0.823 (0.707)	1	0.255 (0.314)	Time
(0.4, 0.6)	2	0.423 (0.063)	2	0.406 (0.305)	3	0.647 (0.722)	1	0.174 (0.299)	Time
(0.5, 0.5)	2	0.420 (0.070)	2	0.403 (0.302)	2	0.637 (0.721)	1	0.163 (0.295)	Time
(0.6, 0.4)	4	0.478 (0.056)	2	0.457 (0.311)	3	0.670 (0.820)	1	0.239 (0.359)	Time
(0.7, 0.3)	3	0.487 (0.067)	2	0.461 (0.315)	2	0.672 (0.819)	1	0.245 (0.364)	Time
(0.8, 0.2)	4	0.593 (0.074)	3	0.567 (0.381)	2	0.633 (0.870)	1	0.291 (0.451)	Time
(0.9, 0.1)	3	0.629 (0.175)	2	0.597 (0.390)	1	0.661 (0.836)	1	0.340 (0.482)	Time

Table 78. HC on 50As for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.542 (0.069)	1	0.520 (0.339)	1	0.574 (0.857)	1	0.296 (0.442)	Eval.
(0.2, 0.8)	1	0.522 (0.074)	1	0.498 (0.356)	1	0.695 (0.886)	1	0.297 (0.407)	Eval.
(0.3, 0.7)	1	0.518 (0.077)	1	0.489 (0.338)	1	0.683 (0.890)	1	0.291 (0.419)	Eval.
(0.4, 0.6)	1	0.456 (0.077)	1	0.430 (0.297)	1	0.601 (0.904)	1	0.255 (0.381)	Eval.
(0.5, 0.5)	1	0.456 (0.078)	1	0.437 (0.301)	1	0.606 (0.906)	1	0.258 (0.380)	Eval.
(0.6, 0.4)	1	0.413 (0.355)	1	0.391 (0.522)	1	0.686 (0.852)	1	0.254 (0.544)	Eval.
(0.7, 0.3)	1	0.388 (0.611)	1	0.363 (0.810)	1	0.637 (0.862)	1	0.249 (0.903)	Eval.
(0.8, 0.2)	1	0.412 (0.562)	1	0.386 (0.799)	1	0.679 (0.853)	1	0.264 (0.883)	Eval.
(0.9, 0.1)	3	0.421 (0.516)	2	0.394 (0.748)	1	0.617 (0.854)	1	0.268 (0.808)	Eval.
(0.1, 0.9)	1	0.331 (0.677)	1	0.309 (0.833)	1	0.561 (0.897)	1	0.203 (0.874)	Time
(0.2, 0.8)	1	0.234 (0.697)	1	0.221 (0.822)	1	0.415 (0.945)	1	0.138 (0.853)	Time
(0.3, 0.7)	1	0.206 (0.757)	1	0.191 (0.853)	1	0.357 (0.938)	1	0.129 (0.854)	Time
(0.4, 0.6)	1	0.177 (0.726)	1	0.164 (0.798)	1	0.313 (0.920)	1	0.110 (0.811)	Time
(0.5, 0.5)	1	0.173 (0.749)	1	0.161 (0.809)	1	0.361 (0.901)	1	0.107 (0.822)	Time
(0.6, 0.4)	2	0.185 (0.743)	2	0.171 (0.814)	3	0.324 (0.958)	1	0.116 (0.826)	Time
(0.7, 0.3)	2	0.221 (0.722)	2	0.208 (0.805)	2	0.354 (0.925)	1	0.153 (0.826)	Time
(0.8, 0.2)	3	0.248 (0.705)	2	0.238 (0.792)	2	0.387 (0.914)	1	0.174 (0.840)	Time
(0.9, 0.1)	4	0.259 (0.704)	3	0.246 (0.808)	2	0.406 (0.940)	1	0.178 (0.855)	Time

Table 79. RS on 50As for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.234 (0.701)	1	0.226 (0.788)	1	0.363 (0.931)	1	0.165 (0.838)	Eval.
(0.2, 0.8)	1	0.217 (0.697)	1	0.206 (0.776)	1	0.332 (0.932)	1	0.159 (0.836)	Eval.
(0.3, 0.7)	1	0.201 (0.714)	1	0.190 (0.766)	1	0.311 (0.932)	1	0.146 (0.838)	Eval.
(0.4, 0.6)	1	0.171 (0.731)	1	0.162 (0.784)	1	0.317 (0.952)	1	0.118 (0.841)	Eval.
(0.5, 0.5)	1	0.160 (0.729)	1	0.154 (0.783)	1	0.304 (0.948)	1	0.114 (0.838)	Eval.
(0.6, 0.4)	1	0.153 (0.729)	1	0.145 (0.791)	1	0.286 (0.949)	1	0.114 (0.840)	Eval.
(0.7, 0.3)	1	0.144 (0.732)	1	0.135 (0.797)	1	0.269 (0.953)	1	0.106 (0.836)	Eval.
(0.8, 0.2)	1	0.137 (0.747)	1	0.129 (0.816)	1	0.271 (0.960)	1	0.099 (0.853)	Eval.
(0.9, 0.1)	1	0.126 (0.755)	1	0.119 (0.827)	1	0.299 (0.972)	1	0.089 (0.849)	Eval.
(0.1, 0.9)	1	0.137 (0.755)	1	0.123 (0.824)	1	0.288 (0.965)	1	0.096 (0.847)	Time
(0.2, 0.8)	1	0.173 (0.739)	1	0.164 (0.801)	1	0.266 (0.952)	1	0.128 (0.828)	Time
(0.3, 0.7)	1	0.204 (0.757)	1	0.203 (0.804)	1	0.254 (0.944)	1	0.174 (0.846)	Time
(0.4, 0.6)	1	0.218 (0.783)	1	0.220 (0.817)	1	0.235 (0.958)	1	0.204 (0.850)	Time
(0.5, 0.5)	1	0.231 (0.820)	1	0.232 (0.836)	1	0.250 (0.969)	1	0.214 (0.876)	Time
(0.6, 0.4)	2	0.212 (0.777)	2	0.214 (0.823)	3	0.228 (0.961)	1	0.199 (0.858)	Time
(0.7, 0.3)	2	0.193 (0.762)	2	0.192 (0.826)	2	0.237 (0.969)	1	0.167 (0.860)	Time
(0.8, 0.2)	3	0.168 (0.761)	2	0.160 (0.817)	2	0.247 (0.964)	1	0.130 (0.855)	Time
(0.9, 0.1)	4	0.145 (0.744)	3	0.134 (0.811)	2	0.265 (0.958)	1	0.112 (0.847)	Time

Table 80. SA on 50As for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.167 (0.755)	1	0.160 (0.813)	1	0.240 (0.961)	1	0.121 (0.751)	Eval.
(0.2, 0.8)	1	0.173 (0.792)	1	0.173 (0.832)	1	0.212 (0.973)	1	0.112 (0.669)	Eval.
(0.3, 0.7)	1	0.193 (0.792)	1	0.195 (0.826)	1	0.207 (0.971)	1	0.118 (0.611)	Eval.
(0.4, 0.6)	1	0.178 (0.815)	1	0.179 (0.844)	1	0.191 (0.977)	1	0.101 (0.473)	Eval.
(0.5, 0.5)	1	0.170 (0.832)	1	0.168 (0.862)	1	0.189 (0.979)	1	0.107 (0.419)	Eval.
(0.6, 0.4)	1	0.174 (0.814)	1	0.171 (0.839)	1	0.195 (0.982)	1	0.115 (0.412)	Eval.
(0.7, 0.3)	1	0.185 (0.809)	1	0.181 (0.831)	1	0.200 (0.988)	1	0.124 (0.409)	Eval.
(0.8, 0.2)	1	0.206 (0.814)	1	0.200 (0.831)	1	0.224 (0.984)	1	0.137 (0.413)	Eval.
(0.9, 0.1)	1	0.197 (0.819)	1	0.195 (0.835)	1	0.220 (0.975)	1	0.137 (0.416)	Eval.
(0.1, 0.9)	1	0.198 (0.820)	1	0.194 (0.833)	1	0.218 (0.971)	1	0.133 (0.385)	Time
(0.2, 0.8)	1	0.202 (0.843)	1	0.195 (0.853)	1	0.218 (0.978)	1	0.130 (0.361)	Time
(0.3, 0.7)	1	0.200 (0.840)	1	0.191 (0.850)	1	0.213 (0.983)	1	0.124 (0.331)	Time
(0.4, 0.6)	1	0.202 (0.826)	1	0.193 (0.837)	1	0.222 (0.982)	1	0.123 (0.311)	Time
(0.5, 0.5)	1	0.215 (0.830)	1	0.206 (0.833)	1	0.240 (0.974)	1	0.128 (0.312)	Time
(0.6, 0.4)	1	0.228 (0.837)	1	0.221 (0.841)	1	0.261 (0.967)	1	0.134 (0.316)	Time
(0.7, 0.3)	1	0.246 (0.838)	1	0.237 (0.846)	1	0.283 (0.966)	1	0.139 (0.319)	Time
(0.8, 0.2)	1	0.264 (0.838)	1	0.249 (0.846)	1	0.301 (0.966)	1	0.144 (0.321)	Time
(0.9, 0.1)	1	0.253 (0.837)	1	0.244 (0.848)	1	0.291 (0.966)	1	0.141 (0.322)	Time

Table 81. SOGA on 5AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.011 (0.000)	2	1.000 (0.000)	2	1.000 (0.000)	1	0.000 (0.000)	Eval.
(0.8, 0.1, 0.1)	1	0.586 (0.575)	2	1.000 (0.000)	2	1.000 (0.000)	2	0.883 (0.883)	Eval.
(0.1, 0.1, 0.8)	2	0.031 (0.106)	3	0.054 (0.946)	3	0.054 (0.946)	1	0.034 (0.047)	Eval.
(0.33, 0.33, 0.33)	1	0.078 (0.082)	3	0.344 (0.977)	3	0.344 (0.977)	2	0.016 (0.244)	Eval.
(0.1, 0.8, 0.1)	1	0.086 (0.303)	2	0.147 (0.853)	2	0.147 (0.853)	1	0.094 (0.130)	Time
(0.8, 0.1, 0.1)	1	0.086 (0.292)	2	0.147 (0.853)	2	0.147 (0.853)	2	0.130 (0.130)	Time
(0.1, 0.1, 0.8)	2	0.031 (0.110)	3	0.054 (0.725)	4	0.054 (0.946)	1	0.034 (0.047)	Time
(0.33, 0.33, 0.33)	1	0.046 (0.082)	3	0.344 (0.749)	3	0.344 (0.977)	2	0.016 (0.244)	Time

Table 82. HC on 5AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.033 (0.243)	2	0.232 (0.904)	2	0.224 (0.904)	1	0.040 (0.078)	Eval.
(0.8, 0.1, 0.1)	1	0.086 (0.237)	2	0.206 (0.926)	2	0.207 (0.926)	1	0.055 (0.151)	Eval.
(0.1, 0.1, 0.8)	2	0.048 (0.082)	3	0.074 (0.749)	3	0.075 (0.977)	1	0.016 (0.244)	Eval.
(0.33, 0.33, 0.33)	1	0.070 (0.082)	3	0.344 (0.749)	3	0.344 (0.977)	2	0.016 (0.244)	Eval.
(0.1, 0.8, 0.1)	1	0.100 (0.159)	2	0.150 (0.945)	2	0.151 (0.949)	1	0.038 (0.483)	Time
(0.8, 0.1, 0.1)	1	0.086 (0.166)	2	0.139 (0.953)	2	0.140 (0.944)	1	0.033 (0.419)	Time
(0.1, 0.1, 0.8)	2	0.052 (0.084)	3	0.074 (0.586)	4	0.075 (0.977)	1	0.016 (0.224)	Time
(0.33, 0.33, 0.33)	1	0.069 (0.084)	3	0.344 (0.504)	3	0.344 (0.971)	2	0.016 (0.244)	Time

Table 83. RS on 5AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.101 (0.163)	2	0.152 (0.916)	2	0.152 (0.907)	1	0.032 (0.426)	Eval.
(0.8, 0.1, 0.1)	1	0.104 (0.170)	2	0.151 (0.905)	2	0.152 (0.890)	1	0.033 (0.406)	Eval.
(0.1, 0.1, 0.8)	2	0.058 (0.114)	3	0.080 (0.559)	3	0.080 (0.947)	1	0.029 (0.244)	Eval.
(0.33, 0.33, 0.33)	1	0.069 (0.148)	3	0.344 (0.491)	3	0.344 (0.945)	2	0.039 (0.244)	Eval.
(0.1, 0.8, 0.1)	1	0.109 (0.255)	2	0.150 (0.881)	2	0.149 (0.896)	1	0.061 (0.456)	Time
(0.8, 0.1, 0.1)	1	0.102 (0.240)	2	0.145 (0.886)	2	0.146 (0.892)	1	0.061 (0.461)	Time
(0.1, 0.1, 0.8)	2	0.058 (0.155)	3	0.080 (0.525)	4	0.080 (0.943)	1	0.038 (0.244)	Time
(0.33, 0.33, 0.33)	1	0.069 (0.159)	3	0.344 (0.476)	3	0.344 (0.942)	2	0.043 (0.244)	Time



Table 84. SA on 5AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.109 (0.286)	3	0.153 (0.868)	3	0.156 (0.891)	1	0.073 (0.456)	Eval.
(0.8, 0.1, 0.1)	2	0.109 (0.285)	3	0.149 (0.875)	3	0.157 (0.887)	1	0.072 (0.455)	Eval.
(0.1, 0.1, 0.8)	2	0.061 (0.164)	3	0.082 (0.521)	3	0.084 (0.941)	1	0.037 (0.224)	Eval.
(0.33, 0.33, 0.33)	1	0.069 (0.175)	2	0.344 (0.482)	3	0.344 (0.941)	1	0.041 (0.234)	Eval.
(0.1, 0.8, 0.1)	2	0.112 (0.307)	3	0.150 (0.854)	3	0.154 (0.892)	1	0.068 (0.412)	Time
(0.8, 0.1, 0.1)	2	0.106 (0.309)	2	0.144 (0.861)	2	0.151 (0.891)	1	0.065 (0.409)	Time
(0.1, 0.1, 0.8)	2	0.061 (0.178)	3	0.081 (0.508)	4	0.084 (0.942)	1	0.031 (0.209)	Time
(0.33, 0.33, 0.33)	1	0.067 (0.175)	3	0.342 (0.478)	4	0.342 (0.943)	2	0.033 (0.227)	Time

Table 85. SOGA on 15AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	Eval.
(0.8, 0.1, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.479)	Eval.
(0.1, 0.1, 0.8)	2	0.000 (0.352)	3	0.000 (1.000)	3	0.000 (1.000)	1	0.053 (0.027)	Eval.
(0.33, 0.33, 0.33)	1	0.329 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	2	0.055 (0.160)	Eval.
(0.1, 0.8, 0.1)	1	0.000 (1.000)	1	0.000 (1.000)	1	0.000 (1.000)	2	0.162 (0.006)	Time
(0.8, 0.1, 0.1)	1	0.000 (1.000)	1	0.000 (1.000)	1	0.000 (1.000)	2	0.162 (0.083)	Time
(0.1, 0.1, 0.8)	2	0.000 (0.352)	3	0.000 (1.000)	3	0.000 (1.000)	1	0.053 (0.027)	Time
(0.33, 0.33, 0.33)	1	0.329 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	2	0.055 (0.160)	Time

Table 86. HC on 15AS-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.723 (1.000)	1	0.726 (1.000)	1	0.686 (1.000)	2	0.168 (0.745)	Eval.
(0.8, 0.1, 0.1)	1	0.714 (0.995)	2	0.751 (0.995)	1	0.687 (0.995)	2	0.167 (0.839)	Eval.
(0.1, 0.1, 0.8)	1	0.288 (0.352)	1	0.302 (1.000)	1	0.284 (1.000)	1	0.055 (0.457)	Eval.
(0.33, 0.33, 0.33)	2	0.329 (0.352)	2	0.329 (1.000)	2	0.329 (1.000)	1	0.117 (0.457)	Eval.
(0.1, 0.8, 0.1)	1	0.295 (0.352)	1	0.325 (1.000)	1	0.318 (1.000)	2	0.200 (0.457)	Time
(0.8, 0.1, 0.1)	1	0.273 (0.352)	1	0.295 (1.000)	1	0.288 (1.000)	2	0.213 (0.457)	Time
(0.1, 0.1, 0.8)	1	0.312 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	1	0.236 (0.457)	Time
(0.33, 0.33, 0.33)	1	0.289 (0.625)	2	0.289 (0.961)	2	0.289 (0.952)	1	0.219 (0.522)	Time

Table 87. RS on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.289 (0.447)	3	0.289 (0.904)	3	0.289 (0.912)	1	0.244 (0.482)	Eval.
(0.8, 0.1, 0.1)	2	0.289 (0.432)	2	0.289 (0.885)	2	0.289 (0.891)	1	0.273 (0.482)	Eval.
(0.1, 0.1, 0.8)	1	0.289 (0.694)	1	0.297 (0.872)	1	0.298 (0.877)	1	0.310 (0.676)	Eval.
(0.33, 0.33, 0.33)	1	0.287 (0.794)	1	0.384 (0.862)	1	0.361 (0.872)	1	0.319 (0.863)	Eval.
(0.1, 0.8, 0.1)	2	0.309 (0.789)	2	0.411 (0.846)	2	0.405 (0.851)	1	0.340 (0.849)	Time
(0.8, 0.1, 0.1)	2	0.314 (0.729)	2	0.421 (0.831)	2	0.414 (0.839)	1	0.344 (0.783)	Time
(0.1, 0.1, 0.8)	1	0.268 (0.784)	1	0.374 (0.837)	1	0.372 (0.854)	1	0.309 (0.872)	Time
(0.33, 0.33, 0.33)	1	0.170 (0.713)	1	0.247 (0.920)	1	0.249 (0.911)	1	0.196 (0.716)	Time

Table 88. SA on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.199 (0.786)	2	0.273 (0.911)	3	0.275 (0.934)	1	0.189 (0.779)	Eval.
(0.8, 0.1, 0.1)	3	0.233 (0.803)	2	0.281 (0.885)	4	0.310 (0.926)	1	0.193 (0.814)	Eval.
(0.1, 0.1, 0.8)	2	0.174 (0.685)	2	0.208 (0.936)	2	0.231 (0.923)	1	0.137 (0.539)	Eval.
(0.33, 0.33, 0.33)	1	0.162 (0.696)	1	0.196 (0.900)	1	0.217 (0.943)	1	0.125 (0.468)	Eval.
(0.1, 0.8, 0.1)	3	0.174 (0.683)	2	0.195 (0.901)	3	0.218 (0.924)	1	0.126 (0.455)	Time
(0.8, 0.1, 0.1)	4	0.182 (0.671)	2	0.193 (0.901)	3	0.216 (0.908)	1	0.124 (0.440)	Time
(0.1, 0.1, 0.8)	2	0.166 (0.650)	2	0.179 (0.867)	2	0.201 (0.919)	1	0.110 (0.366)	Time
(0.33, 0.33, 0.33)	2	0.167 (0.658)	2	0.186 (0.844)	2	0.207 (0.924)	1	0.111 (0.353)	Time

Table 89. SOGA on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.000)	Eval.
(0.8, 0.1, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	1	0.000 (0.000)	2	1.000 (0.479)	Eval.
(0.1, 0.1, 0.8)	2	0.000 (0.352)	3	0.000 (1.000)	3	0.000 (1.000)	1	0.053 (0.027)	Eval.
(0.33, 0.33, 0.33)	1	0.329 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	2	0.055 (0.160)	Eval.
(0.1, 0.8, 0.1)	1	0.000 (1.000)	1	0.000 (1.000)	1	0.000 (1.000)	2	0.162 (0.006)	Time
(0.8, 0.1, 0.1)	1	0.000 (1.000)	1	0.000 (1.000)	1	0.000 (1.000)	2	0.162 (0.083)	Time
(0.1, 0.1, 0.8)	2	0.000 (0.352)	3	0.000 (1.000)	3	0.000 (1.000)	1	0.053 (0.027)	Time
(0.33, 0.33, 0.33)	1	0.329 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	2	0.055 (0.160)	Time

Table 90. HC on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.723 (1.000)	1	0.726 (1.000)	1	0.686 (1.000)	2	0.168 (0.745)	Eval.
(0.8, 0.1, 0.1)	1	0.714 (0.995)	2	0.751 (0.995)	1	0.687 (0.995)	2	0.167 (0.839)	Eval.
(0.1, 0.1, 0.8)	1	0.288 (0.352)	1	0.302 (1.000)	1	0.284 (1.000)	1	0.055 (0.457)	Eval.
(0.33, 0.33, 0.33)	2	0.329 (0.352)	2	0.329 (1.000)	2	0.329 (1.000)	1	0.117 (0.457)	Eval.
(0.1, 0.8, 0.1)	1	0.295 (0.352)	1	0.325 (1.000)	1	0.318 (1.000)	2	0.200 (0.457)	Time
(0.8, 0.1, 0.1)	1	0.273 (0.352)	1	0.295 (1.000)	1	0.288 (1.000)	2	0.213 (0.457)	Time
(0.1, 0.1, 0.8)	1	0.312 (0.352)	1	0.329 (1.000)	1	0.329 (1.000)	1	0.236 (0.457)	Time
(0.33, 0.33, 0.33)	1	0.289 (0.625)	2	0.289 (0.961)	2	0.289 (0.952)	1	0.219 (0.522)	Time

Table 91. RS on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.289 (0.447)	3	0.289 (0.904)	3	0.289 (0.912)	1	0.244 (0.482)	Eval.
(0.8, 0.1, 0.1)	2	0.289 (0.432)	2	0.289 (0.885)	2	0.289 (0.891)	1	0.273 (0.482)	Eval.
(0.1, 0.1, 0.8)	1	0.289 (0.694)	1	0.297 (0.872)	1	0.298 (0.877)	1	0.310 (0.676)	Eval.
(0.33, 0.33, 0.33)	1	0.287 (0.794)	1	0.384 (0.862)	1	0.361 (0.872)	1	0.319 (0.863)	Eval.
(0.1, 0.8, 0.1)	2	0.309 (0.789)	2	0.411 (0.846)	2	0.405 (0.851)	1	0.340 (0.849)	Time
(0.8, 0.1, 0.1)	2	0.314 (0.729)	2	0.421 (0.831)	2	0.414 (0.839)	1	0.344 (0.783)	Time
(0.1, 0.1, 0.8)	1	0.268 (0.784)	1	0.374 (0.837)	1	0.372 (0.854)	1	0.309 (0.872)	Time
(0.33, 0.33, 0.33)	1	0.170 (0.713)	1	0.247 (0.920)	1	0.249 (0.911)	1	0.196 (0.716)	Time

Table 92. SA on 15As-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.199 (0.786)	2	0.273 (0.911)	3	0.275 (0.934)	1	0.189 (0.779)	Eval.
(0.8, 0.1, 0.1)	3	0.233 (0.803)	2	0.281 (0.885)	4	0.310 (0.926)	1	0.193 (0.814)	Eval.
(0.1, 0.1, 0.8)	2	0.174 (0.685)	2	0.208 (0.936)	2	0.231 (0.923)	1	0.137 (0.539)	Eval.
(0.33, 0.33, 0.33)	1	0.162 (0.696)	1	0.196 (0.900)	1	0.217 (0.943)	1	0.125 (0.468)	Eval.
(0.1, 0.8, 0.1)	3	0.174 (0.683)	2	0.195 (0.901)	3	0.218 (0.924)	1	0.126 (0.455)	Time
(0.8, 0.1, 0.1)	4	0.182 (0.671)	2	0.193 (0.901)	3	0.216 (0.908)	1	0.124 (0.440)	Time
(0.1, 0.1, 0.8)	2	0.166 (0.650)	2	0.179 (0.867)	2	0.201 (0.919)	1	0.110 (0.366)	Time
(0.33, 0.33, 0.33)	2	0.167 (0.658)	2	0.186 (0.844)	2	0.207 (0.924)	1	0.111 (0.353)	Time

Table 93. SOGA on NRP-E1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.001 (0.054)	1	0.026 (0.027)	2	0.851 (0.152)	2	0.851 (0.046)	Eval.
(0.2, 0.8)	2	0.233 (0.298)	1	0.076 (0.105)	3	0.998 (0.606)	3	0.998 (0.606)	Eval.
(0.3, 0.7)	2	0.176 (0.364)	1	0.062 (0.076)	3	0.619 (0.720)	3	0.619 (0.751)	Eval.
(0.4, 0.6)	1	0.167 (0.231)	1	0.030 (0.054)	1	0.716 (0.568)	1	0.716 (0.568)	Eval.
(0.5, 0.5)	1	0.229 (0.205)	1	0.010 (0.031)	1	0.628 (0.546)	1	0.628 (0.629)	Eval.
(0.6, 0.4)	2	0.196 (0.159)	1	0.028 (0.032)	3	0.772 (0.671)	3	0.772 (0.674)	Eval.
(0.7, 0.3)	1	0.151 (0.117)	1	0.023 (0.027)	1	0.633 (0.719)	1	0.633 (0.721)	Eval.
(0.8, 0.2)	1	0.115 (0.079)	1	0.013 (0.017)	1	0.496 (0.623)	1	0.688 (0.623)	Eval.
(0.9, 0.1)	2	0.096 (0.074)	1	0.014 (0.019)	2	0.330 (0.423)	3	0.600 (0.671)	Eval.
(0.1, 0.9)	1	0.105 (0.093)	1	0.020 (0.027)	2	0.370 (0.589)	2	0.667 (0.777)	Time
(0.2, 0.8)	2	0.094 (0.092)	1	0.012 (0.028)	3	0.241 (0.596)	3	0.538 (0.770)	Time
(0.3, 0.7)	2	0.107 (0.092)	1	0.012 (0.028)	3	0.384 (0.482)	3	0.538 (0.769)	Time
(0.4, 0.6)	2	0.118 (0.095)	1	0.013 (0.026)	3	0.403 (0.367)	3	0.565 (0.758)	Time
(0.5, 0.5)	2	0.133 (0.110)	1	0.017 (0.025)	3	0.433 (0.553)	3	0.611 (0.731)	Time
(0.6, 0.4)	2	0.146 (0.106)	1	0.019 (0.026)	3	0.450 (0.575)	3	0.658 (0.691)	Time
(0.7, 0.3)	2	0.120 (0.086)	1	0.019 (0.022)	3	0.499 (0.620)	3	0.690 (0.620)	Time
(0.8, 0.2)	2	0.116 (0.085)	1	0.016 (0.022)	3	0.380 (0.511)	4	0.689 (0.620)	Time
(0.9, 0.1)	1	0.105 (0.080)	1	0.015 (0.021)	1	0.362 (0.463)	1	0.658 (0.638)	Time

Table 94. HC on NRP-E1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.113 (0.084)	1	0.022 (0.028)	2	0.384 (0.598)	2	0.691 (0.734)	Eval.
(0.2, 0.8)	2	0.113 (0.080)	1	0.021 (0.028)	3	0.384 (0.481)	3	0.691 (0.769)	Eval.
(0.3, 0.7)	2	0.116 (0.085)	1	0.013 (0.028)	3	0.384 (0.481)	3	0.559 (0.759)	Eval.
(0.4, 0.6)	2	0.121 (0.090)	1	0.021 (0.028)	3	0.384 (0.482)	3	0.539 (0.759)	Eval.
(0.5, 0.5)	2	0.120 (0.096)	1	0.016 (0.022)	3	0.380 (0.485)	3	0.557 (0.706)	Eval.
(0.6, 0.4)	2	0.123 (0.096)	1	0.016 (0.022)	3	0.381 (0.485)	3	0.690 (0.620)	Eval.
(0.7, 0.3)	1	0.120 (0.094)	1	0.016 (0.022)	1	0.397 (0.513)	1	0.690 (0.620)	Eval.
(0.8, 0.2)	1	0.117 (0.091)	1	0.016 (0.022)	1	0.380 (0.486)	1	0.689 (0.620)	Eval.
(0.9, 0.1)	2	0.108 (0.084)	1	0.015 (0.021)	2	0.362 (0.463)	3	0.658 (0.638)	Eval.
(0.1, 0.9)	1	0.112 (0.087)	1	0.021 (0.027)	2	0.370 (0.465)	2	0.667 (0.630)	Time
(0.2, 0.8)	2	0.114 (0.089)	1	0.022 (0.028)	3	0.384 (0.481)	3	0.691 (0.759)	Time
(0.3, 0.7)	2	0.119 (0.092)	1	0.021 (0.028)	3	0.383 (0.481)	3	0.691 (0.759)	Time
(0.4, 0.6)	2	0.121 (0.093)	1	0.022 (0.028)	3	0.383 (0.481)	3	0.608 (0.702)	Time
(0.5, 0.5)	2	0.120 (0.099)	1	0.016 (0.022)	3	0.380 (0.485)	3	0.690 (0.620)	Time
(0.6, 0.4)	2	0.123 (0.098)	1	0.016 (0.022)	3	0.381 (0.485)	3	0.690 (0.620)	Time
(0.7, 0.3)	1	0.120 (0.093)	1	0.016 (0.022)	1	0.380 (0.486)	1	0.689 (0.620)	Time
(0.8, 0.2)	2	0.118 (0.090)	1	0.016 (0.022)	3	0.380 (0.486)	4	0.689 (0.620)	Time
(0.9, 0.1)	2	0.111 (0.088)	1	0.015 (0.021)	2	0.366 (0.469)	3	0.666 (0.634)	Time

Table 95. RS on NRP-E1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.113 (0.090)	1	0.015 (0.021)	1	0.366 (0.467)	1	0.665 (0.634)	Eval.
(0.2, 0.8)	1	0.120 (0.095)	1	0.016 (0.022)	1	0.380 (0.484)	1	0.689 (0.621)	Eval.
(0.3, 0.7)	2	0.123 (0.099)	1	0.016 (0.022)	1	0.380 (0.484)	1	0.689 (0.658)	Eval.
(0.4, 0.6)	2	0.124 (0.102)	1	0.019 (0.022)	1	0.380 (0.484)	1	0.689 (0.687)	Eval.
(0.5, 0.5)	3	0.129 (0.106)	1	0.019 (0.022)	2	0.378 (0.484)	1	0.606 (0.718)	Eval.
(0.6, 0.4)	2	0.132 (0.112)	1	0.019 (0.025)	2	0.348 (0.484)	1	0.556 (0.752)	Eval.
(0.7, 0.3)	2	0.133 (0.108)	1	0.019 (0.031)	3	0.327 (0.485)	1	0.537 (0.764)	Eval.
(0.8, 0.2)	2	0.132 (0.106)	1	0.019 (0.031)	2	0.307 (0.485)	1	0.537 (0.774)	Eval.
(0.9, 0.1)	2	0.130 (0.106)	1	0.019 (0.031)	2	0.294 (0.498)	1	0.535 (0.775)	Eval.
(0.1, 0.9)	1	0.132 (0.112)	1	0.019 (0.031)	1	0.306 (0.493)	1	0.535 (0.774)	Time
(0.2, 0.8)	1	0.133 (0.118)	1	0.019 (0.031)	1	0.306 (0.488)	1	0.535 (0.774)	Time
(0.3, 0.7)	2	0.136 (0.124)	1	0.019 (0.031)	1	0.298 (0.485)	1	0.535 (0.774)	Time
(0.4, 0.6)	2	0.137 (0.133)	1	0.019 (0.031)	1	0.292 (0.402)	1	0.414 (0.774)	Time
(0.5, 0.5)	3	0.146 (0.144)	1	0.023 (0.046)	2	0.294 (0.371)	1	0.416 (0.763)	Time
(0.6, 0.4)	3	0.160 (0.156)	1	0.025 (0.102)	2	0.309 (0.411)	1	0.434 (0.743)	Time
(0.7, 0.3)	2	0.154 (0.152)	1	0.019 (0.093)	3	0.293 (0.395)	1	0.430 (0.752)	Time
(0.8, 0.2)	2	0.157 (0.149)	1	0.019 (0.093)	2	0.289 (0.411)	1	0.437 (0.764)	Time
(0.9, 0.1)	2	0.164 (0.154)	1	0.026 (0.099)	2	0.291 (0.425)	1	0.449 (0.779)	Time

Table 96. SA on NRP-E1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.165 (0.161)	2	0.026 (0.106)	2	0.299 (0.421)	1	0.449 (0.782)	Eval.
(0.2, 0.8)	2	0.160 (0.167)	2	0.019 (0.117)	2	0.304 (0.419)	1	0.445 (0.789)	Eval.
(0.3, 0.7)	2	0.165 (0.172)	2	0.019 (0.149)	2	0.314 (0.417)	1	0.444 (0.791)	Eval.
(0.4, 0.6)	4	0.167 (0.177)	2	0.019 (0.158)	3	0.314 (0.415)	1	0.428 (0.795)	Eval.
(0.5, 0.5)	4	0.169 (0.184)	2	0.019 (0.191)	3	0.306 (0.412)	1	0.412 (0.802)	Eval.
(0.6, 0.4)	3	0.172 (0.181)	2	0.020 (0.183)	3	0.303 (0.412)	1	0.401 (0.812)	Eval.
(0.7, 0.3)	3	0.173 (0.178)	2	0.020 (0.179)	4	0.293 (0.415)	1	0.389 (0.833)	Eval.
(0.8, 0.2)	2	0.172 (0.171)	1	0.020 (0.172)	2	0.288 (0.421)	1	0.375 (0.844)	Eval.
(0.9, 0.1)	2	0.167 (0.176)	1	0.020 (0.167)	2	0.281 (0.430)	1	0.363 (0.850)	Eval.
(0.1, 0.9)	2	0.172 (0.181)	2	0.020 (0.183)	2	0.288 (0.427)	1	0.353 (0.849)	Time
(0.2, 0.8)	2	0.173 (0.187)	2	0.020 (0.200)	2	0.293 (0.318)	1	0.344 (0.848)	Time
(0.3, 0.7)	3	0.191 (0.208)	2	0.021 (0.230)	2	0.328 (0.323)	1	0.363 (0.835)	Time
(0.4, 0.6)	3	0.211 (0.230)	2	0.023 (0.267)	2	0.353 (0.324)	1	0.387 (0.820)	Time
(0.5, 0.5)	4	0.212 (0.229)	2	0.023 (0.264)	3	0.345 (0.308)	1	0.374 (0.822)	Time
(0.6, 0.4)	3	0.222 (0.234)	2	0.027 (0.271)	3	0.354 (0.310)	1	0.378 (0.821)	Time
(0.7, 0.3)	3	0.224 (0.229)	2	0.027 (0.267)	4	0.348 (0.311)	1	0.372 (0.830)	Time
(0.8, 0.2)	2	0.219 (0.227)	1	0.036 (0.264)	2	0.340 (0.319)	1	0.362 (0.843)	Time
(0.9, 0.1)	2	0.220 (0.229)	1	0.027 (0.262)	2	0.336 (0.320)	1	0.354 (0.855)	Time

Table 97. SOGA on NRP-E2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.016 (0.016)	1	0.061 (0.002)	2	0.773 (0.227)	2	0.942 (0.227)	Eval.
(0.2, 0.8)	2	0.130 (0.219)	1	0.120 (0.100)	3	0.851 (0.517)	3	0.851 (0.592)	Eval.
(0.3, 0.7)	1	0.160 (0.336)	1	0.088 (0.126)	1	0.622 (0.683)	1	0.731 (0.683)	Eval.
(0.4, 0.6)	1	0.109 (0.249)	1	0.041 (0.047)	1	0.707 (0.586)	1	0.707 (0.586)	Eval.
(0.5, 0.5)	1	0.181 (0.201)	1	0.033 (0.057)	1	0.573 (0.637)	1	0.671 (0.667)	Eval.
(0.6, 0.4)	1	0.153 (0.144)	1	0.030 (0.050)	1	0.635 (0.558)	1	0.635 (0.684)	Eval.
(0.7, 0.3)	2	0.122 (0.108)	1	0.034 (0.045)	3	0.490 (0.480)	4	0.634 (0.712)	Eval.
(0.8, 0.2)	2	0.092 (0.087)	1	0.014 (0.027)	3	0.362 (0.496)	4	0.681 (0.638)	Eval.
(0.9, 0.1)	2	0.072 (0.080)	1	0.012 (0.018)	3	0.245 (0.513)	4	0.720 (0.688)	Eval.
(0.1, 0.9)	1	0.080 (0.094)	1	0.022 (0.036)	2	0.191 (0.500)	2	0.595 (0.770)	Time
(0.2, 0.8)	2	0.085 (0.100)	1	0.022 (0.040)	3	0.212 (0.508)	3	0.599 (0.788)	Time
(0.3, 0.7)	2	0.092 (0.103)	1	0.023 (0.040)	3	0.265 (0.438)	3	0.532 (0.780)	Time
(0.4, 0.6)	2	0.102 (0.109)	1	0.023 (0.037)	3	0.301 (0.426)	3	0.532 (0.735)	Time
(0.5, 0.5)	2	0.107 (0.105)	1	0.021 (0.038)	3	0.374 (0.451)	3	0.613 (0.723)	Time
(0.6, 0.4)	2	0.110 (0.107)	1	0.032 (0.038)	3	0.381 (0.498)	3	0.665 (0.712)	Time
(0.7, 0.3)	1	0.098 (0.100)	1	0.020 (0.033)	1	0.435 (0.493)	1	0.683 (0.634)	Time
(0.8, 0.2)	1	0.089 (0.095)	1	0.013 (0.020)	1	0.353 (0.484)	1	0.664 (0.647)	Time
(0.9, 0.1)	2	0.075 (0.080)	1	0.012 (0.018)	3	0.312 (0.428)	4	0.687 (0.688)	Time

Table 98. HC on NRP-E2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.083 (0.086)	1	0.027 (0.032)	2	0.257 (0.516)	2	0.594 (0.756)	Eval.
(0.2, 0.8)	2	0.084 (0.089)	1	0.019 (0.035)	3	0.246 (0.547)	3	0.632 (0.759)	Eval.
(0.3, 0.7)	1	0.096 (0.102)	1	0.018 (0.037)	1	0.364 (0.533)	1	0.635 (0.744)	Eval.
(0.4, 0.6)	1	0.102 (0.106)	1	0.020 (0.037)	1	0.373 (0.452)	1	0.620 (0.723)	Eval.
(0.5, 0.5)	1	0.106 (0.106)	1	0.030 (0.037)	1	0.373 (0.488)	1	0.651 (0.687)	Eval.
(0.6, 0.4)	1	0.098 (0.104)	1	0.021 (0.028)	1	0.367 (0.492)	1	0.683 (0.633)	Eval.
(0.7, 0.3)	2	0.097 (0.104)	1	0.020 (0.027)	3	0.435 (0.493)	3	0.683 (0.634)	Eval.
(0.8, 0.2)	2	0.079 (0.090)	1	0.012 (0.018)	3	0.320 (0.437)	4	0.601 (0.680)	Eval.
(0.9, 0.1)	2	0.075 (0.088)	1	0.012 (0.018)	2	0.312 (0.428)	3	0.687 (0.688)	Eval.
(0.1, 0.9)	1	0.075 (0.087)	1	0.018 (0.024)	2	0.317 (0.518)	2	0.590 (0.683)	Time
(0.2, 0.8)	2	0.079 (0.089)	1	0.026 (0.032)	3	0.323 (0.473)	3	0.594 (0.761)	Time
(0.3, 0.7)	1	0.086 (0.092)	1	0.018 (0.033)	1	0.330 (0.431)	1	0.607 (0.751)	Time
(0.4, 0.6)	2	0.097 (0.101)	1	0.028 (0.034)	3	0.359 (0.470)	3	0.635 (0.641)	Time
(0.5, 0.5)	1	0.094 (0.107)	1	0.020 (0.027)	1	0.358 (0.480)	1	0.667 (0.642)	Time
(0.6, 0.4)	1	0.095 (0.107)	1	0.020 (0.026)	1	0.357 (0.481)	1	0.666 (0.643)	Time
(0.7, 0.3)	2	0.095 (0.107)	1	0.020 (0.026)	3	0.424 (0.481)	3	0.666 (0.643)	Time
(0.8, 0.2)	1	0.077 (0.092)	1	0.012 (0.018)	1	0.312 (0.428)	1	0.587 (0.688)	Time
(0.9, 0.1)	2	0.075 (0.089)	1	0.012 (0.018)	2	0.312 (0.428)	3	0.687 (0.688)	Time

Table 99. RS on NRP-E2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.077 (0.095)	1	0.012 (0.018)	1	0.312 (0.428)	1	0.587 (0.688)	Eval.
(0.2, 0.8)	1	0.079 (0.094)	1	0.012 (0.023)	1	0.312 (0.428)	1	0.587 (0.696)	Eval.
(0.3, 0.7)	2	0.080 (0.100)	1	0.012 (0.023)	1	0.312 (0.428)	1	0.587 (0.727)	Eval.
(0.4, 0.6)	3	0.084 (0.099)	1	0.012 (0.023)	2	0.297 (0.428)	1	0.587 (0.747)	Eval.
(0.5, 0.5)	3	0.097 (0.117)	1	0.013 (0.026)	2	0.307 (0.477)	1	0.629 (0.745)	Eval.
(0.6, 0.4)	2	0.103 (0.123)	1	0.013 (0.026)	2	0.291 (0.484)	1	0.629 (0.754)	Eval.
(0.7, 0.3)	2	0.106 (0.121)	1	0.015 (0.028)	3	0.277 (0.484)	1	0.598 (0.757)	Eval.
(0.8, 0.2)	2	0.106 (0.122)	1	0.016 (0.029)	3	0.269 (0.496)	1	0.614 (0.778)	Eval.
(0.9, 0.1)	1	0.102 (0.122)	1	0.016 (0.029)	1	0.264 (0.512)	1	0.522 (0.797)	Eval.
(0.1, 0.9)	1	0.106 (0.126)	1	0.016 (0.029)	1	0.269 (0.479)	1	0.522 (0.794)	Time
(0.2, 0.8)	1	0.108 (0.133)	1	0.016 (0.029)	1	0.268 (0.463)	1	0.522 (0.786)	Time
(0.3, 0.7)	2	0.109 (0.142)	1	0.016 (0.029)	1	0.264 (0.428)	1	0.522 (0.784)	Time
(0.4, 0.6)	3	0.112 (0.150)	1	0.016 (0.029)	2	0.257 (0.428)	1	0.455 (0.797)	Time
(0.5, 0.5)	3	0.115 (0.153)	1	0.018 (0.041)	2	0.249 (0.341)	1	0.431 (0.797)	Time
(0.6, 0.4)	2	0.115 (0.149)	1	0.018 (0.070)	2	0.249 (0.347)	1	0.431 (0.797)	Time
(0.7, 0.3)	2	0.117 (0.148)	1	0.020 (0.071)	3	0.244 (0.348)	1	0.384 (0.805)	Time
(0.8, 0.2)	2	0.116 (0.148)	1	0.020 (0.069)	3	0.241 (0.363)	1	0.370 (0.816)	Time
(0.9, 0.1)	1	0.117 (0.150)	1	0.021 (0.067)	1	0.236 (0.373)	1	0.370 (0.831)	Time

Table 100. SA on NRP-E2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.117 (0.153)	2	0.021 (0.075)	2	0.242 (0.368)	1	0.370 (0.833)	Eval.
(0.2, 0.8)	2	0.119 (0.159)	2	0.020 (0.092)	2	0.249 (0.365)	1	0.370 (0.834)	Eval.
(0.3, 0.7)	2	0.121 (0.163)	2	0.020 (0.112)	2	0.254 (0.363)	1	0.361 (0.837)	Eval.
(0.4, 0.6)	4	0.140 (0.195)	2	0.023 (0.141)	3	0.293 (0.417)	1	0.390 (0.816)	Eval.
(0.5, 0.5)	3	0.147 (0.203)	2	0.024 (0.165)	3	0.290 (0.418)	1	0.376 (0.822)	Eval.
(0.6, 0.4)	3	0.147 (0.199)	2	0.023 (0.164)	4	0.285 (0.416)	1	0.366 (0.832)	Eval.
(0.7, 0.3)	2	0.149 (0.190)	1	0.029 (0.160)	3	0.280 (0.419)	1	0.357 (0.846)	Eval.
(0.8, 0.2)	2	0.147 (0.181)	1	0.031 (0.155)	2	0.275 (0.426)	1	0.345 (0.855)	Eval.
(0.9, 0.1)	1	0.147 (0.192)	1	0.029 (0.151)	1	0.270 (0.365)	1	0.331 (0.864)	Eval.
(0.1, 0.9)	2	0.147 (0.199)	2	0.031 (0.164)	2	0.275 (0.352)	1	0.322 (0.863)	Time
(0.2, 0.8)	2	0.149 (0.196)	2	0.031 (0.175)	2	0.280 (0.349)	1	0.317 (0.862)	Time
(0.3, 0.7)	3	0.153 (0.199)	2	0.031 (0.190)	2	0.283 (0.318)	1	0.314 (0.862)	Time
(0.4, 0.6)	4	0.155 (0.200)	2	0.031 (0.204)	3	0.282 (0.318)	1	0.310 (0.861)	Time
(0.5, 0.5)	4	0.157 (0.198)	2	0.031 (0.204)	3	0.279 (0.315)	1	0.303 (0.863)	Time
(0.6, 0.4)	3	0.158 (0.193)	2	0.031 (0.201)	3	0.276 (0.273)	1	0.297 (0.869)	Time
(0.7, 0.3)	3	0.166 (0.199)	2	0.033 (0.207)	4	0.285 (0.270)	1	0.312 (0.868)	Time
(0.8, 0.2)	2	0.165 (0.198)	1	0.033 (0.204)	2	0.282 (0.263)	1	0.307 (0.875)	Time
(0.9, 0.1)	1	0.164 (0.202)	1	0.033 (0.201)	1	0.278 (0.265)	1	0.300 (0.885)	Time

Table 101. SOGA on NRP-E3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	2	0.184 (0.000)	2	0.184 (0.816)	2	0.184 (0.816)	Eval.
(0.2, 0.8)	1	0.065 (0.078)	1	0.172 (0.097)	1	0.336 (0.332)	1	0.336 (0.925)	Eval.
(0.3, 0.7)	1	0.078 (0.146)	2	0.172 (0.268)	3	0.407 (0.261)	3	0.597 (0.664)	Eval.
(0.4, 0.6)	1	0.055 (0.126)	2	0.297 (0.193)	3	0.569 (0.558)	3	0.569 (0.710)	Eval.
(0.5, 0.5)	1	0.047 (0.094)	2	0.177 (0.119)	3	0.516 (0.516)	3	0.516 (0.781)	Eval.
(0.6, 0.4)	1	0.069 (0.099)	2	0.181 (0.161)	3	0.515 (0.470)	3	0.609 (0.658)	Eval.
(0.7, 0.3)	1	0.051 (0.064)	2	0.129 (0.101)	3	0.451 (0.372)	3	0.493 (0.754)	Eval.
(0.8, 0.2)	1	0.039 (0.062)	2	0.139 (0.051)	3	0.420 (0.580)	4	0.710 (0.725)	Eval.
(0.9, 0.1)	1	0.035 (0.064)	3	0.129 (0.093)	2	0.375 (0.509)	4	0.727 (0.625)	Eval.
(0.1, 0.9)	1	0.038 (0.067)	2	0.132 (0.094)	2	0.253 (0.498)	2	0.627 (0.747)	Time
(0.2, 0.8)	1	0.027 (0.066)	2	0.105 (0.094)	3	0.163 (0.382)	3	0.502 (0.871)	Time
(0.3, 0.7)	1	0.043 (0.073)	1	0.151 (0.108)	1	0.289 (0.437)	1	0.525 (0.853)	Time
(0.4, 0.6)	1	0.042 (0.074)	1	0.150 (0.098)	1	0.288 (0.437)	1	0.508 (0.815)	Time
(0.5, 0.5)	1	0.043 (0.075)	2	0.147 (0.108)	3	0.286 (0.439)	3	0.571 (0.714)	Time
(0.6, 0.4)	1	0.052 (0.075)	2	0.147 (0.112)	3	0.429 (0.429)	3	0.571 (0.714)	Time
(0.7, 0.3)	1	0.051 (0.074)	2	0.150 (0.111)	3	0.428 (0.572)	3	0.571 (0.715)	Time
(0.8, 0.2)	1	0.048 (0.074)	1	0.145 (0.111)	1	0.428 (0.583)	1	0.714 (0.715)	Time
(0.9, 0.1)	1	0.043 (0.072)	3	0.147 (0.106)	2	0.286 (0.582)	4	0.714 (0.714)	Time

Table 102. HC on NRP-E3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.042 (0.075)	1	0.150 (0.108)	1	0.288 (0.437)	1	0.715 (0.712)	Eval.
(0.2, 0.8)	1	0.041 (0.074)	2	0.149 (0.108)	3	0.288 (0.438)	3	0.653 (0.712)	Eval.
(0.3, 0.7)	1	0.039 (0.072)	2	0.147 (0.108)	3	0.286 (0.525)	3	0.652 (0.714)	Eval.
(0.4, 0.6)	1	0.035 (0.066)	2	0.128 (0.095)	3	0.250 (0.384)	3	0.500 (0.750)	Eval.
(0.5, 0.5)	1	0.042 (0.066)	2	0.128 (0.095)	3	0.375 (0.384)	4	0.575 (0.750)	Eval.
(0.6, 0.4)	1	0.046 (0.068)	2	0.128 (0.097)	3	0.375 (0.509)	3	0.625 (0.750)	Eval.
(0.7, 0.3)	1	0.046 (0.068)	2	0.128 (0.097)	3	0.375 (0.500)	4	0.625 (0.750)	Eval.
(0.8, 0.2)	1	0.042 (0.065)	2	0.127 (0.097)	3	0.374 (0.510)	4	0.624 (0.751)	Eval.
(0.9, 0.1)	1	0.039 (0.066)	2	0.128 (0.093)	1	0.375 (0.509)	3	0.625 (0.625)	Eval.
(0.1, 0.9)	1	0.037 (0.066)	2	0.128 (0.093)	2	0.375 (0.509)	3	0.625 (0.750)	Time
(0.2, 0.8)	1	0.034 (0.066)	2	0.128 (0.095)	3	0.375 (0.509)	3	0.625 (0.750)	Time
(0.3, 0.7)	1	0.035 (0.066)	2	0.128 (0.095)	4	0.375 (0.509)	3	0.625 (0.750)	Time
(0.4, 0.6)	1	0.039 (0.066)	2	0.128 (0.095)	3	0.375 (0.509)	3	0.625 (0.750)	Time
(0.5, 0.5)	1	0.043 (0.071)	2	0.128 (0.093)	3	0.375 (0.509)	4	0.625 (0.750)	Time
(0.6, 0.4)	1	0.044 (0.073)	2	0.128 (0.097)	3	0.375 (0.509)	4	0.625 (0.750)	Time
(0.7, 0.3)	1	0.046 (0.071)	2	0.128 (0.097)	3	0.375 (0.509)	3	0.625 (0.750)	Time
(0.8, 0.2)	1	0.042 (0.067)	2	0.127 (0.097)	3	0.374 (0.510)	4	0.727 (0.626)	Time
(0.9, 0.1)	1	0.039 (0.066)	2	0.128 (0.093)	1	0.375 (0.509)	3	0.727 (0.625)	Time



Table 103. RS on NRP-E3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.043 (0.073)	1	0.128 (0.093)	1	0.375 (0.509)	1	0.727 (0.750)	Eval.
(0.2, 0.8)	1	0.046 (0.074)	1	0.128 (0.093)	1	0.375 (0.509)	1	0.625 (0.750)	Eval.
(0.3, 0.7)	1	0.044 (0.074)	1	0.127 (0.094)	1	0.249 (0.510)	1	0.624 (0.751)	Eval.
(0.4, 0.6)	1	0.045 (0.076)	1	0.127 (0.097)	1	0.249 (0.510)	1	0.624 (0.751)	Eval.
(0.5, 0.5)	1	0.047 (0.083)	2	0.127 (0.097)	1	0.249 (0.385)	2	0.624 (0.837)	Eval.
(0.6, 0.4)	1	0.050 (0.083)	2	0.127 (0.097)	1	0.249 (0.385)	3	0.624 (0.842)	Eval.
(0.7, 0.3)	1	0.051 (0.083)	2	0.127 (0.097)	1	0.248 (0.385)	3	0.499 (0.843)	Eval.
(0.8, 0.2)	1	0.048 (0.081)	3	0.125 (0.096)	2	0.247 (0.391)	4	0.498 (0.844)	Eval.
(0.9, 0.1)	1	0.047 (0.083)	2	0.127 (0.094)	1	0.158 (0.397)	3	0.499 (0.842)	Eval.
(0.1, 0.9)	1	0.050 (0.083)	1	0.127 (0.093)	1	0.149 (0.403)	1	0.499 (0.854)	Time
(0.2, 0.8)	1	0.051 (0.083)	1	0.127 (0.093)	1	0.137 (0.405)	1	0.499 (0.860)	Time
(0.3, 0.7)	1	0.055 (0.089)	2	0.135 (0.101)	1	0.141 (0.438)	2	0.491 (0.855)	Time
(0.4, 0.6)	1	0.061 (0.097)	2	0.142 (0.107)	1	0.145 (0.465)	2	0.504 (0.850)	Time
(0.5, 0.5)	1	0.062 (0.096)	2	0.140 (0.107)	1	0.140 (0.467)	3	0.425 (0.852)	Time
(0.6, 0.4)	1	0.055 (0.089)	2	0.133 (0.104)	1	0.130 (0.475)	3	0.420 (0.859)	Time
(0.7, 0.3)	1	0.054 (0.088)	2	0.132 (0.095)	1	0.130 (0.478)	3	0.420 (0.860)	Time
(0.8, 0.2)	1	0.054 (0.087)	3	0.130 (0.092)	2	0.130 (0.482)	4	0.420 (0.859)	Time
(0.9, 0.1)	1	0.060 (0.092)	2	0.134 (0.101)	1	0.137 (0.481)	3	0.425 (0.852)	Time

Table 104. SA on NRP-E3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.054 (0.089)	2	0.129 (0.096)	2	0.130 (0.484)	1	0.420 (0.863)	Eval.
(0.2, 0.8)	1	0.054 (0.091)	1	0.130 (0.093)	1	0.130 (0.483)	1	0.405 (0.867)	Eval.
(0.3, 0.7)	1	0.056 (0.094)	1	0.132 (0.087)	1	0.130 (0.455)	1	0.354 (0.869)	Eval.
(0.4, 0.6)	1	0.057 (0.097)	1	0.133 (0.083)	1	0.130 (0.431)	2	0.325 (0.869)	Eval.
(0.5, 0.5)	1	0.056 (0.097)	1	0.132 (0.082)	1	0.129 (0.430)	2	0.314 (0.870)	Eval.
(0.6, 0.4)	1	0.054 (0.095)	2	0.130 (0.079)	1	0.127 (0.415)	3	0.306 (0.871)	Eval.
(0.7, 0.3)	1	0.052 (0.093)	1	0.126 (0.077)	1	0.125 (0.417)	1	0.304 (0.871)	Eval.
(0.8, 0.2)	1	0.052 (0.093)	1	0.125 (0.079)	1	0.125 (0.420)	1	0.301 (0.870)	Eval.
(0.9, 0.1)	1	0.056 (0.097)	2	0.127 (0.084)	1	0.125 (0.342)	3	0.287 (0.866)	Eval.
(0.1, 0.9)	2	0.063 (0.111)	2	0.144 (0.095)	2	0.142 (0.401)	1	0.319 (0.851)	Time
(0.2, 0.8)	1	0.061 (0.109)	1	0.142 (0.094)	1	0.139 (0.401)	1	0.317 (0.854)	Time
(0.3, 0.7)	1	0.061 (0.111)	1	0.142 (0.092)	1	0.139 (0.400)	2	0.317 (0.854)	Time
(0.4, 0.6)	1	0.065 (0.114)	2	0.142 (0.088)	1	0.138 (0.399)	3	0.317 (0.854)	Time
(0.5, 0.5)	1	0.061 (0.111)	2	0.139 (0.087)	1	0.133 (0.400)	3	0.314 (0.858)	Time
(0.6, 0.4)	1	0.060 (0.109)	2	0.138 (0.085)	1	0.130 (0.402)	3	0.313 (0.859)	Time
(0.7, 0.3)	1	0.059 (0.108)	2	0.137 (0.085)	1	0.128 (0.404)	3	0.312 (0.858)	Time
(0.8, 0.2)	1	0.058 (0.105)	1	0.135 (0.085)	1	0.127 (0.406)	1	0.312 (0.858)	Time
(0.9, 0.1)	1	0.060 (0.108)	2	0.137 (0.089)	1	0.131 (0.407)	3	0.314 (0.853)	Time

Table 105. SOGA on NRP-E4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.022 (0.022)	1	0.049 (0.000)	2	0.805 (0.492)	2	0.805 (0.492)	Eval.
(0.2, 0.8)	2	0.124 (0.217)	1	0.054 (0.064)	3	0.685 (0.586)	3	0.685 (0.586)	Eval.
(0.3, 0.7)	1	0.178 (0.325)	1	0.065 (0.076)	1	0.821 (0.566)	1	0.821 (0.575)	Eval.
(0.4, 0.6)	1	0.156 (0.235)	1	0.035 (0.046)	1	0.690 (0.558)	1	0.690 (0.589)	Eval.
(0.5, 0.5)	1	0.165 (0.162)	1	0.017 (0.027)	1	0.699 (0.614)	1	0.699 (0.710)	Eval.
(0.6, 0.4)	1	0.155 (0.125)	1	0.019 (0.023)	1	0.584 (0.468)	1	0.603 (0.632)	Eval.
(0.7, 0.3)	2	0.134 (0.112)	1	0.017 (0.021)	3	0.532 (0.521)	4	0.688 (0.624)	Eval.
(0.8, 0.2)	2	0.100 (0.072)	1	0.005 (0.012)	3	0.313 (0.396)	4	0.640 (0.687)	Eval.
(0.9, 0.1)	2	0.088 (0.069)	1	0.010 (0.016)	2	0.255 (0.397)	3	0.695 (0.684)	Eval.
(0.1, 0.9)	1	0.102 (0.083)	1	0.024 (0.032)	2	0.198 (0.447)	2	0.648 (0.707)	Time
(0.2, 0.8)	2	0.091 (0.087)	1	0.022 (0.032)	3	0.198 (0.323)	3	0.586 (0.802)	Time
(0.3, 0.7)	2	0.096 (0.079)	1	0.017 (0.023)	3	0.197 (0.333)	3	0.480 (0.803)	Time
(0.4, 0.6)	2	0.099 (0.087)	1	0.009 (0.016)	3	0.290 (0.330)	3	0.474 (0.710)	Time
(0.5, 0.5)	2	0.120 (0.110)	1	0.013 (0.021)	3	0.376 (0.521)	3	0.688 (0.665)	Time
(0.6, 0.4)	2	0.125 (0.104)	1	0.013 (0.021)	3	0.376 (0.521)	3	0.688 (0.624)	Time
(0.7, 0.3)	2	0.125 (0.098)	1	0.014 (0.021)	3	0.376 (0.521)	4	0.688 (0.624)	Time
(0.8, 0.2)	2	0.105 (0.081)	1	0.011 (0.018)	3	0.290 (0.451)	4	0.659 (0.674)	Time
(0.9, 0.1)	2	0.101 (0.080)	1	0.011 (0.018)	2	0.190 (0.455)	3	0.727 (0.676)	Time

Table 106. HC on NRP-E4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.112 (0.083)	1	0.024 (0.033)	2	0.203 (0.333)	2	0.664 (0.664)	Eval.
(0.2, 0.8)	2	0.098 (0.086)	1	0.017 (0.026)	3	0.197 (0.333)	3	0.599 (0.705)	Eval.
(0.3, 0.7)	2	0.099 (0.089)	1	0.009 (0.016)	3	0.191 (0.336)	3	0.595 (0.710)	Eval.
(0.4, 0.6)	2	0.101 (0.090)	1	0.011 (0.018)	3	0.290 (0.337)	3	0.595 (0.709)	Eval.
(0.5, 0.5)	2	0.105 (0.090)	1	0.011 (0.018)	3	0.291 (0.451)	4	0.595 (0.674)	Eval.
(0.6, 0.4)	2	0.108 (0.091)	1	0.011 (0.018)	3	0.326 (0.451)	4	0.595 (0.674)	Eval.
(0.7, 0.3)	2	0.107 (0.088)	1	0.012 (0.018)	3	0.291 (0.451)	4	0.659 (0.674)	Eval.
(0.8, 0.2)	2	0.104 (0.087)	1	0.011 (0.018)	3	0.290 (0.451)	4	0.660 (0.674)	Eval.
(0.9, 0.1)	2	0.101 (0.086)	1	0.011 (0.018)	2	0.190 (0.455)	3	0.727 (0.676)	Eval.
(0.1, 0.9)	1	0.106 (0.086)	1	0.019 (0.026)	2	0.197 (0.453)	2	0.663 (0.669)	Time
(0.2, 0.8)	2	0.094 (0.085)	1	0.009 (0.018)	3	0.191 (0.433)	3	0.659 (0.709)	Time
(0.3, 0.7)	2	0.099 (0.089)	1	0.011 (0.018)	3	0.191 (0.337)	3	0.595 (0.674)	Time
(0.4, 0.6)	2	0.101 (0.091)	1	0.011 (0.018)	3	0.290 (0.433)	3	0.595 (0.674)	Time
(0.5, 0.5)	2	0.104 (0.094)	1	0.011 (0.018)	3	0.290 (0.451)	4	0.595 (0.674)	Time
(0.6, 0.4)	1	0.107 (0.094)	1	0.011 (0.018)	1	0.326 (0.451)	1	0.659 (0.674)	Time
(0.7, 0.3)	2	0.107 (0.092)	1	0.011 (0.018)	3	0.290 (0.451)	4	0.659 (0.674)	Time
(0.8, 0.2)	2	0.104 (0.090)	1	0.011 (0.018)	3	0.290 (0.451)	4	0.730 (0.674)	Time
(0.9, 0.1)	2	0.101 (0.088)	1	0.011 (0.018)	2	0.191 (0.457)	3	0.730 (0.674)	Time

Table 107. RS on NRP-E4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.104 (0.092)	1	0.011 (0.018)	1	0.290 (0.451)	1	0.730 (0.674)	Eval.
(0.2, 0.8)	1	0.107 (0.098)	1	0.011 (0.018)	1	0.284 (0.451)	1	0.659 (0.674)	Eval.
(0.3, 0.7)	2	0.108 (0.098)	1	0.012 (0.019)	1	0.267 (0.427)	1	0.659 (0.696)	Eval.
(0.4, 0.6)	3	0.110 (0.104)	1	0.012 (0.019)	2	0.253 (0.331)	1	0.595 (0.710)	Eval.
(0.5, 0.5)	2	0.113 (0.104)	1	0.015 (0.021)	2	0.238 (0.331)	1	0.595 (0.710)	Eval.
(0.6, 0.4)	2	0.116 (0.109)	1	0.015 (0.021)	3	0.228 (0.330)	1	0.595 (0.734)	Eval.
(0.7, 0.3)	2	0.116 (0.107)	1	0.015 (0.021)	3	0.218 (0.330)	1	0.595 (0.766)	Eval.
(0.8, 0.2)	2	0.120 (0.109)	1	0.016 (0.021)	2	0.218 (0.343)	1	0.595 (0.791)	Eval.
(0.9, 0.1)	2	0.131 (0.121)	1	0.017 (0.024)	2	0.231 (0.381)	1	0.550 (0.779)	Eval.
(0.1, 0.9)	1	0.133 (0.126)	1	0.018 (0.024)	1	0.242 (0.365)	1	0.548 (0.779)	Time
(0.2, 0.8)	1	0.134 (0.132)	1	0.018 (0.024)	1	0.252 (0.365)	1	0.548 (0.776)	Time
(0.3, 0.7)	2	0.137 (0.137)	1	0.018 (0.026)	1	0.250 (0.365)	1	0.532 (0.775)	Time
(0.4, 0.6)	3	0.142 (0.146)	1	0.018 (0.026)	2	0.243 (0.365)	1	0.532 (0.780)	Time
(0.5, 0.5)	3	0.142 (0.150)	1	0.018 (0.036)	2	0.237 (0.365)	1	0.532 (0.780)	Time
(0.6, 0.4)	2	0.146 (0.148)	1	0.018 (0.078)	3	0.235 (0.365)	1	0.532 (0.780)	Time
(0.7, 0.3)	2	0.141 (0.143)	1	0.013 (0.069)	3	0.225 (0.368)	1	0.478 (0.801)	Time
(0.8, 0.2)	2	0.139 (0.139)	1	0.012 (0.065)	3	0.220 (0.368)	1	0.372 (0.817)	Time
(0.9, 0.1)	2	0.145 (0.145)	1	0.021 (0.073)	2	0.229 (0.374)	1	0.385 (0.821)	Time

Table 108. SA on NRP-E4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.150 (0.152)	2	0.021 (0.081)	2	0.232 (0.374)	1	0.385 (0.824)	Eval.
(0.2, 0.8)	2	0.145 (0.156)	2	0.014 (0.089)	2	0.231 (0.255)	1	0.382 (0.833)	Eval.
(0.3, 0.7)	2	0.146 (0.161)	2	0.012 (0.111)	2	0.234 (0.251)	1	0.381 (0.837)	Eval.
(0.4, 0.6)	4	0.147 (0.162)	2	0.012 (0.123)	3	0.238 (0.244)	1	0.362 (0.840)	Eval.
(0.5, 0.5)	4	0.151 (0.163)	2	0.012 (0.144)	3	0.237 (0.230)	1	0.339 (0.843)	Eval.
(0.6, 0.4)	3	0.158 (0.166)	2	0.013 (0.148)	4	0.246 (0.230)	1	0.352 (0.842)	Eval.
(0.7, 0.3)	3	0.160 (0.162)	2	0.013 (0.145)	4	0.243 (0.225)	1	0.351 (0.852)	Eval.
(0.8, 0.2)	2	0.158 (0.161)	1	0.014 (0.142)	2	0.239 (0.225)	1	0.351 (0.864)	Eval.
(0.9, 0.1)	2	0.161 (0.168)	1	0.013 (0.141)	2	0.243 (0.232)	1	0.350 (0.870)	Eval.
(0.1, 0.9)	2	0.172 (0.181)	2	0.015 (0.162)	2	0.260 (0.246)	1	0.361 (0.861)	Time
(0.2, 0.8)	2	0.174 (0.183)	2	0.015 (0.174)	2	0.265 (0.246)	1	0.351 (0.859)	Time
(0.3, 0.7)	3	0.181 (0.194)	2	0.016 (0.196)	2	0.274 (0.251)	1	0.342 (0.855)	Time
(0.4, 0.6)	4	0.183 (0.192)	2	0.018 (0.207)	3	0.273 (0.251)	1	0.328 (0.858)	Time
(0.5, 0.5)	4	0.183 (0.191)	2	0.018 (0.206)	3	0.271 (0.251)	1	0.320 (0.861)	Time
(0.6, 0.4)	3	0.186 (0.186)	2	0.018 (0.203)	4	0.270 (0.251)	1	0.313 (0.865)	Time
(0.7, 0.3)	3	0.186 (0.186)	2	0.018 (0.201)	4	0.267 (0.249)	1	0.306 (0.865)	Time
(0.8, 0.2)	2	0.183 (0.184)	1	0.018 (0.199)	3	0.264 (0.242)	1	0.294 (0.869)	Time
(0.9, 0.1)	2	0.183 (0.187)	1	0.018 (0.194)	2	0.261 (0.236)	1	0.286 (0.875)	Time

Table 109. SOGA on NRP-G1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.063 (0.236)	1	0.236 (0.027)	2	0.916 (0.084)	2	0.916 (0.084)	Eval.
(0.2, 0.8)	1	0.114 (0.204)	1	0.139 (0.104)	2	0.819 (0.690)	2	0.725 (0.629)	Eval.
(0.3, 0.7)	2	0.094 (0.243)	1	0.069 (0.152)	3	0.582 (0.816)	3	0.582 (0.816)	Eval.
(0.4, 0.6)	2	0.107 (0.246)	1	0.073 (0.079)	3	0.487 (0.381)	4	0.698 (0.707)	Eval.
(0.5, 0.5)	2	0.133 (0.238)	1	0.067 (0.068)	3	0.555 (0.259)	4	0.589 (0.670)	Eval.
(0.6, 0.4)	1	0.157 (0.195)	1	0.048 (0.052)	1	0.351 (0.224)	1	0.722 (0.726)	Eval.
(0.7, 0.3)	2	0.146 (0.163)	1	0.039 (0.043)	3	0.396 (0.162)	4	0.617 (0.748)	Eval.
(0.8, 0.2)	2	0.116 (0.107)	1	0.029 (0.032)	3	0.249 (0.140)	4	0.677 (0.645)	Eval.
(0.9, 0.1)	2	0.110 (0.111)	1	0.033 (0.040)	2	0.244 (0.131)	3	0.665 (0.656)	Eval.
(0.1, 0.9)	1	0.118 (0.130)	2	0.050 (0.060)	3	0.265 (0.284)	3	0.687 (0.782)	Time
(0.2, 0.8)	2	0.097 (0.130)	1	0.028 (0.057)	3	0.231 (0.267)	3	0.530 (0.784)	Time
(0.3, 0.7)	2	0.094 (0.133)	1	0.035 (0.045)	3	0.276 (0.198)	3	0.574 (0.777)	Time
(0.4, 0.6)	2	0.110 (0.138)	1	0.039 (0.047)	3	0.290 (0.180)	3	0.588 (0.771)	Time
(0.5, 0.5)	2	0.129 (0.157)	1	0.046 (0.050)	3	0.306 (0.179)	4	0.621 (0.740)	Time
(0.6, 0.4)	2	0.142 (0.146)	1	0.049 (0.050)	3	0.306 (0.179)	4	0.657 (0.740)	Time
(0.7, 0.3)	2	0.131 (0.127)	1	0.042 (0.044)	3	0.273 (0.147)	4	0.723 (0.616)	Time
(0.8, 0.2)	2	0.123 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	4	0.681 (0.638)	Time
(0.9, 0.1)	2	0.110 (0.111)	1	0.033 (0.040)	2	0.244 (0.131)	3	0.646 (0.656)	Time

Table 110. HC on NRP-G1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.123 (0.121)	1	0.046 (0.055)	2	0.268 (0.271)	2	0.686 (0.771)	Eval.
(0.2, 0.8)	1	0.104 (0.120)	1	0.033 (0.043)	2	0.252 (0.180)	2	0.681 (0.781)	Eval.
(0.3, 0.7)	2	0.108 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	3	0.553 (0.782)	Eval.
(0.4, 0.6)	2	0.111 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	4	0.553 (0.782)	Eval.
(0.5, 0.5)	2	0.116 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	4	0.615 (0.751)	Eval.
(0.6, 0.4)	2	0.125 (0.122)	1	0.039 (0.044)	3	0.263 (0.141)	4	0.695 (0.639)	Eval.
(0.7, 0.3)	1	0.123 (0.120)	1	0.038 (0.042)	1	0.257 (0.138)	1	0.681 (0.638)	Eval.
(0.8, 0.2)	2	0.117 (0.121)	1	0.028 (0.035)	3	0.252 (0.139)	4	0.679 (0.642)	Eval.
(0.9, 0.1)	2	0.113 (0.112)	1	0.033 (0.040)	2	0.244 (0.131)	3	0.646 (0.656)	Eval.
(0.1, 0.9)	1	0.110 (0.114)	1	0.034 (0.041)	2	0.245 (0.171)	2	0.646 (0.664)	Time
(0.2, 0.8)	1	0.111 (0.120)	1	0.032 (0.042)	2	0.251 (0.138)	2	0.681 (0.782)	Time
(0.3, 0.7)	2	0.111 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	3	0.681 (0.751)	Time
(0.4, 0.6)	2	0.116 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	3	0.615 (0.751)	Time
(0.5, 0.5)	2	0.119 (0.120)	1	0.035 (0.042)	3	0.257 (0.138)	4	0.681 (0.638)	Time
(0.6, 0.4)	1	0.122 (0.120)	1	0.037 (0.044)	1	0.257 (0.151)	1	0.681 (0.638)	Time
(0.7, 0.3)	2	0.122 (0.116)	1	0.037 (0.043)	3	0.257 (0.138)	4	0.681 (0.638)	Time
(0.8, 0.2)	2	0.116 (0.117)	1	0.028 (0.035)	3	0.252 (0.139)	4	0.679 (0.642)	Time
(0.9, 0.1)	2	0.110 (0.110)	1	0.033 (0.040)	2	0.244 (0.131)	3	0.646 (0.656)	Time

Table 111. RS on NRP-G1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.116 (0.110)	1	0.033 (0.042)	1	0.244 (0.131)	1	0.646 (0.656)	Eval.
(0.2, 0.8)	2	0.119 (0.115)	1	0.036 (0.043)	1	0.248 (0.153)	1	0.656 (0.760)	Eval.
(0.3, 0.7)	2	0.117 (0.118)	1	0.032 (0.037)	1	0.245 (0.181)	1	0.679 (0.787)	Eval.
(0.4, 0.6)	2	0.118 (0.119)	1	0.033 (0.041)	1	0.245 (0.194)	1	0.679 (0.803)	Eval.
(0.5, 0.5)	3	0.122 (0.121)	1	0.033 (0.040)	2	0.243 (0.201)	1	0.611 (0.804)	Eval.
(0.6, 0.4)	2	0.120 (0.121)	1	0.030 (0.040)	3	0.241 (0.198)	1	0.548 (0.806)	Eval.
(0.7, 0.3)	2	0.120 (0.121)	1	0.030 (0.040)	3	0.241 (0.195)	1	0.548 (0.818)	Eval.
(0.8, 0.2)	3	0.119 (0.121)	1	0.030 (0.040)	4	0.226 (0.202)	2	0.516 (0.840)	Eval.
(0.9, 0.1)	2	0.118 (0.118)	1	0.033 (0.042)	2	0.211 (0.209)	2	0.518 (0.855)	Eval.
(0.1, 0.9)	1	0.116 (0.118)	1	0.030 (0.040)	1	0.209 (0.213)	1	0.516 (0.867)	Time
(0.2, 0.8)	2	0.116 (0.118)	1	0.030 (0.041)	1	0.194 (0.217)	1	0.516 (0.876)	Time
(0.3, 0.7)	2	0.123 (0.121)	1	0.031 (0.044)	1	0.198 (0.226)	1	0.526 (0.881)	Time
(0.4, 0.6)	2	0.128 (0.126)	1	0.032 (0.047)	1	0.206 (0.237)	1	0.452 (0.885)	Time
(0.5, 0.5)	3	0.136 (0.132)	1	0.034 (0.051)	2	0.219 (0.256)	1	0.427 (0.884)	Time
(0.6, 0.4)	2	0.136 (0.125)	1	0.034 (0.054)	3	0.219 (0.254)	1	0.427 (0.890)	Time
(0.7, 0.3)	2	0.136 (0.118)	1	0.034 (0.054)	3	0.219 (0.252)	1	0.401 (0.896)	Time
(0.8, 0.2)	3	0.134 (0.117)	1	0.034 (0.052)	4	0.219 (0.250)	2	0.401 (0.900)	Time
(0.9, 0.1)	2	0.139 (0.140)	1	0.036 (0.055)	2	0.231 (0.270)	3	0.423 (0.900)	Time

Table 112. SA on NRP-G1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.142 (0.134)	2	0.036 (0.058)	2	0.231 (0.269)	1	0.423 (0.904)	Eval.
(0.2, 0.8)	2	0.143 (0.129)	2	0.036 (0.062)	2	0.231 (0.267)	1	0.423 (0.906)	Eval.
(0.3, 0.7)	3	0.143 (0.127)	2	0.036 (0.069)	2	0.231 (0.266)	1	0.287 (0.907)	Eval.
(0.4, 0.6)	2	0.144 (0.124)	1	0.036 (0.076)	1	0.231 (0.265)	1	0.253 (0.907)	Eval.
(0.5, 0.5)	2	0.144 (0.122)	1	0.037 (0.083)	1	0.231 (0.264)	1	0.250 (0.908)	Eval.
(0.6, 0.4)	2	0.147 (0.116)	1	0.037 (0.085)	3	0.231 (0.263)	1	0.250 (0.909)	Eval.
(0.7, 0.3)	2	0.146 (0.114)	1	0.036 (0.083)	3	0.230 (0.261)	2	0.245 (0.911)	Eval.
(0.8, 0.2)	2	0.141 (0.112)	1	0.034 (0.078)	3	0.228 (0.262)	2	0.228 (0.915)	Eval.
(0.9, 0.1)	2	0.144 (0.121)	1	0.037 (0.080)	2	0.231 (0.266)	3	0.231 (0.914)	Eval.
(0.1, 0.9)	2	0.152 (0.123)	2	0.039 (0.089)	2	0.244 (0.280)	1	0.244 (0.913)	Time
(0.2, 0.8)	3	0.153 (0.121)	2	0.038 (0.094)	2	0.243 (0.280)	1	0.243 (0.915)	Time
(0.3, 0.7)	2	0.168 (0.131)	1	0.039 (0.105)	1	0.266 (0.291)	1	0.266 (0.911)	Time
(0.4, 0.6)	2	0.168 (0.132)	1	0.038 (0.108)	1	0.266 (0.278)	1	0.266 (0.912)	Time
(0.5, 0.5)	2	0.169 (0.132)	1	0.041 (0.109)	1	0.266 (0.267)	1	0.248 (0.913)	Time
(0.6, 0.4)	1	0.170 (0.128)	1	0.040 (0.107)	1	0.265 (0.274)	1	0.238 (0.914)	Time
(0.7, 0.3)	1	0.167 (0.125)	1	0.038 (0.104)	1	0.264 (0.265)	1	0.231 (0.915)	Time
(0.8, 0.2)	1	0.165 (0.125)	1	0.038 (0.103)	1	0.264 (0.258)	1	0.230 (0.915)	Time
(0.9, 0.1)	2	0.171 (0.134)	1	0.041 (0.107)	2	0.272 (0.259)	3	0.227 (0.911)	Time

Table 113. SOGA on NRP-G2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.014 (0.020)	1	0.021 (0.035)	2	0.251 (0.749)	2	0.251 (0.060)	Eval.
(0.2, 0.8)	2	0.098 (0.187)	1	0.048 (0.092)	3	0.643 (0.759)	3	0.643 (0.759)	Eval.
(0.3, 0.7)	2	0.171 (0.376)	1	0.086 (0.092)	3	0.665 (0.606)	3	0.712 (0.719)	Eval.
(0.4, 0.6)	2	0.187 (0.290)	1	0.043 (0.069)	3	0.713 (0.575)	3	0.713 (0.575)	Eval.
(0.5, 0.5)	2	0.192 (0.218)	1	0.014 (0.042)	3	0.540 (0.689)	3	0.625 (0.689)	Eval.
(0.6, 0.4)	1	0.175 (0.171)	1	0.017 (0.031)	1	0.439 (0.374)	1	0.626 (0.699)	Eval.
(0.7, 0.3)	1	0.152 (0.129)	1	0.011 (0.024)	1	0.307 (0.266)	1	0.720 (0.630)	Eval.
(0.8, 0.2)	2	0.132 (0.099)	1	0.010 (0.023)	3	0.293 (0.315)	4	0.733 (0.629)	Eval.
(0.9, 0.1)	2	0.105 (0.110)	1	0.012 (0.020)	3	0.246 (0.282)	4	0.698 (0.678)	Eval.
(0.1, 0.9)	1	0.122 (0.115)	1	0.026 (0.039)	2	0.280 (0.266)	2	0.648 (0.662)	Time
(0.2, 0.8)	2	0.122 (0.122)	1	0.025 (0.040)	3	0.292 (0.170)	3	0.693 (0.768)	Time
(0.3, 0.7)	2	0.122 (0.119)	1	0.023 (0.034)	3	0.296 (0.166)	3	0.652 (0.772)	Time
(0.4, 0.6)	2	0.114 (0.126)	1	0.013 (0.023)	3	0.285 (0.326)	3	0.529 (0.744)	Time
(0.5, 0.5)	2	0.120 (0.137)	1	0.012 (0.026)	3	0.294 (0.326)	3	0.686 (0.646)	Time
(0.6, 0.4)	2	0.133 (0.133)	1	0.012 (0.026)	3	0.284 (0.326)	4	0.686 (0.646)	Time
(0.7, 0.3)	2	0.132 (0.126)	1	0.011 (0.025)	3	0.283 (0.314)	4	0.686 (0.629)	Time
(0.8, 0.2)	2	0.128 (0.126)	1	0.012 (0.026)	3	0.284 (0.326)	4	0.780 (0.628)	Time
(0.9, 0.1)	2	0.104 (0.107)	1	0.011 (0.022)	3	0.245 (0.282)	4	0.698 (0.678)	Time

Table 114. HC on NRP-G2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.115 (0.106)	1	0.030 (0.038)	2	0.260 (0.143)	2	0.680 (0.681)	Eval.
(0.2, 0.8)	2	0.123 (0.123)	1	0.021 (0.036)	3	0.294 (0.167)	3	0.691 (0.636)	Eval.
(0.3, 0.7)	2	0.119 (0.131)	1	0.015 (0.028)	3	0.288 (0.168)	3	0.688 (0.642)	Eval.
(0.4, 0.6)	2	0.121 (0.133)	1	0.013 (0.025)	3	0.284 (0.326)	3	0.686 (0.645)	Eval.
(0.5, 0.5)	2	0.128 (0.136)	1	0.012 (0.026)	3	0.284 (0.326)	3	0.686 (0.646)	Eval.
(0.6, 0.4)	1	0.134 (0.136)	1	0.012 (0.026)	1	0.284 (0.326)	1	0.686 (0.645)	Eval.
(0.7, 0.3)	2	0.132 (0.134)	1	0.012 (0.026)	3	0.284 (0.326)	4	0.686 (0.628)	Eval.
(0.8, 0.2)	2	0.126 (0.130)	1	0.012 (0.026)	3	0.279 (0.321)	4	0.774 (0.634)	Eval.
(0.9, 0.1)	2	0.104 (0.112)	1	0.011 (0.022)	2	0.245 (0.282)	3	0.698 (0.678)	Eval.
(0.1, 0.9)	1	0.110 (0.114)	1	0.018 (0.030)	2	0.251 (0.145)	2	0.681 (0.688)	Time
(0.2, 0.8)	2	0.118 (0.125)	1	0.017 (0.032)	3	0.285 (0.165)	3	0.767 (0.646)	Time
(0.3, 0.7)	2	0.120 (0.134)	1	0.011 (0.025)	3	0.285 (0.169)	3	0.686 (0.645)	Time
(0.4, 0.6)	2	0.121 (0.134)	1	0.012 (0.026)	3	0.284 (0.326)	3	0.686 (0.646)	Time
(0.5, 0.5)	2	0.128 (0.140)	1	0.012 (0.026)	3	0.284 (0.326)	3	0.686 (0.646)	Time
(0.6, 0.4)	1	0.132 (0.139)	1	0.012 (0.026)	1	0.284 (0.326)	1	0.686 (0.628)	Time
(0.7, 0.3)	2	0.128 (0.137)	1	0.012 (0.026)	3	0.284 (0.326)	4	0.777 (0.628)	Time
(0.8, 0.2)	2	0.128 (0.135)	1	0.012 (0.026)	3	0.284 (0.326)	4	0.786 (0.628)	Time
(0.9, 0.1)	2	0.109 (0.116)	1	0.011 (0.023)	2	0.252 (0.150)	3	0.718 (0.669)	Time

Table 115. RS on NRP-G2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.120 (0.127)	1	0.012 (0.024)	1	0.265 (0.158)	1	0.733 (0.653)	Eval.
(0.2, 0.8)	1	0.131 (0.137)	1	0.012 (0.028)	1	0.284 (0.169)	1	0.777 (0.646)	Eval.
(0.3, 0.7)	1	0.134 (0.142)	1	0.012 (0.029)	1	0.284 (0.169)	1	0.686 (0.656)	Eval.
(0.4, 0.6)	2	0.135 (0.147)	1	0.012 (0.031)	2	0.279 (0.169)	1	0.686 (0.697)	Eval.
(0.5, 0.5)	2	0.138 (0.150)	1	0.012 (0.031)	3	0.279 (0.169)	1	0.686 (0.727)	Eval.
(0.6, 0.4)	2	0.140 (0.150)	1	0.014 (0.031)	3	0.283 (0.169)	1	0.686 (0.756)	Eval.
(0.7, 0.3)	2	0.141 (0.145)	1	0.014 (0.030)	3	0.275 (0.170)	1	0.675 (0.768)	Eval.
(0.8, 0.2)	2	0.139 (0.138)	1	0.014 (0.029)	3	0.274 (0.170)	1	0.634 (0.787)	Eval.
(0.9, 0.1)	2	0.136 (0.145)	1	0.015 (0.031)	2	0.276 (0.169)	1	0.566 (0.785)	Eval.
(0.1, 0.9)	1	0.140 (0.150)	1	0.016 (0.032)	1	0.276 (0.169)	1	0.529 (0.786)	Time
(0.2, 0.8)	1	0.141 (0.154)	1	0.015 (0.030)	1	0.273 (0.154)	1	0.528 (0.787)	Time
(0.3, 0.7)	2	0.145 (0.151)	1	0.016 (0.030)	1	0.267 (0.152)	1	0.528 (0.787)	Time
(0.4, 0.6)	3	0.148 (0.150)	1	0.017 (0.030)	2	0.261 (0.152)	1	0.528 (0.787)	Time
(0.5, 0.5)	2	0.149 (0.145)	1	0.018 (0.032)	3	0.258 (0.152)	1	0.488 (0.802)	Time
(0.6, 0.4)	2	0.150 (0.141)	1	0.018 (0.054)	3	0.263 (0.151)	1	0.428 (0.811)	Time
(0.7, 0.3)	2	0.162 (0.143)	1	0.020 (0.056)	3	0.279 (0.156)	1	0.400 (0.811)	Time
(0.8, 0.2)	2	0.167 (0.144)	1	0.020 (0.053)	3	0.283 (0.159)	1	0.414 (0.825)	Time
(0.9, 0.1)	2	0.163 (0.158)	1	0.020 (0.051)	2	0.278 (0.159)	1	0.414 (0.838)	Time

Table 116. SA on NRP-G2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.177 (0.168)	2	0.021 (0.064)	2	0.301 (0.169)	1	0.439 (0.831)	Eval.
(0.2, 0.8)	2	0.178 (0.166)	2	0.023 (0.078)	2	0.305 (0.162)	1	0.418 (0.837)	Eval.
(0.3, 0.7)	3	0.178 (0.165)	2	0.023 (0.102)	3	0.306 (0.157)	1	0.418 (0.843)	Eval.
(0.4, 0.6)	1	0.183 (0.167)	1	0.025 (0.118)	1	0.305 (0.151)	1	0.409 (0.850)	Eval.
(0.5, 0.5)	3	0.187 (0.166)	2	0.025 (0.133)	4	0.308 (0.152)	1	0.393 (0.852)	Eval.
(0.6, 0.4)	3	0.188 (0.160)	2	0.026 (0.135)	4	0.311 (0.149)	1	0.362 (0.860)	Eval.
(0.7, 0.3)	3	0.188 (0.157)	2	0.028 (0.132)	4	0.307 (0.146)	1	0.339 (0.869)	Eval.
(0.8, 0.2)	2	0.187 (0.155)	1	0.027 (0.128)	2	0.303 (0.141)	1	0.325 (0.878)	Eval.
(0.9, 0.1)	2	0.183 (0.160)	1	0.025 (0.125)	2	0.300 (0.142)	1	0.314 (0.888)	Eval.
(0.1, 0.9)	2	0.187 (0.163)	2	0.027 (0.135)	2	0.302 (0.139)	1	0.306 (0.888)	Time
(0.2, 0.8)	2	0.188 (0.165)	2	0.028 (0.146)	2	0.303 (0.136)	1	0.291 (0.889)	Time
(0.3, 0.7)	4	0.189 (0.166)	2	0.028 (0.161)	3	0.301 (0.132)	1	0.281 (0.889)	Time
(0.4, 0.6)	3	0.192 (0.165)	2	0.028 (0.173)	3	0.298 (0.130)	1	0.279 (0.891)	Time
(0.5, 0.5)	3	0.196 (0.163)	2	0.028 (0.171)	4	0.300 (0.130)	1	0.273 (0.895)	Time
(0.6, 0.4)	3	0.203 (0.168)	2	0.028 (0.174)	4	0.313 (0.138)	1	0.276 (0.898)	Time
(0.7, 0.3)	3	0.202 (0.166)	2	0.028 (0.169)	4	0.310 (0.136)	1	0.264 (0.904)	Time
(0.8, 0.2)	2	0.198 (0.166)	1	0.027 (0.166)	3	0.307 (0.136)	1	0.261 (0.910)	Time
(0.9, 0.1)	2	0.198 (0.168)	1	0.030 (0.167)	2	0.307 (0.138)	1	0.264 (0.914)	Time

Table 117. SOGA on NRP-G3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.044 (0.044)	1	0.061 (0.000)	2	0.637 (0.363)	2	0.637 (0.363)	Eval.
(0.2, 0.8)	2	0.138 (0.213)	1	0.063 (0.073)	3	0.792 (0.703)	3	0.792 (0.703)	Eval.
(0.3, 0.7)	2	0.165 (0.313)	1	0.063 (0.072)	3	0.777 (0.629)	3	0.777 (0.629)	Eval.
(0.4, 0.6)	2	0.136 (0.218)	1	0.022 (0.036)	3	0.712 (0.576)	3	0.712 (0.576)	Eval.
(0.5, 0.5)	2	0.159 (0.161)	1	0.010 (0.027)	3	0.578 (0.640)	4	0.691 (0.677)	Eval.
(0.6, 0.4)	2	0.152 (0.125)	1	0.016 (0.024)	3	0.632 (0.560)	3	0.632 (0.659)	Eval.
(0.7, 0.3)	2	0.126 (0.099)	1	0.015 (0.019)	3	0.658 (0.522)	4	0.658 (0.704)	Eval.
(0.8, 0.2)	2	0.109 (0.074)	1	0.007 (0.012)	3	0.510 (0.601)	4	0.660 (0.640)	Eval.
(0.9, 0.1)	2	0.093 (0.062)	1	0.012 (0.016)	2	0.336 (0.527)	3	0.712 (0.681)	Eval.
(0.1, 0.9)	1	0.103 (0.082)	1	0.023 (0.025)	2	0.335 (0.566)	2	0.601 (0.742)	Time
(0.2, 0.8)	2	0.090 (0.081)	1	0.017 (0.025)	3	0.258 (0.483)	3	0.560 (0.798)	Time
(0.3, 0.7)	2	0.102 (0.086)	1	0.012 (0.020)	3	0.367 (0.449)	3	0.516 (0.781)	Time
(0.4, 0.6)	2	0.111 (0.090)	1	0.017 (0.019)	3	0.380 (0.444)	3	0.535 (0.775)	Time
(0.5, 0.5)	2	0.109 (0.096)	1	0.014 (0.019)	3	0.378 (0.470)	3	0.549 (0.712)	Time
(0.6, 0.4)	1	0.116 (0.096)	1	0.014 (0.019)	1	0.476 (0.470)	1	0.664 (0.663)	Time
(0.7, 0.3)	1	0.116 (0.079)	1	0.014 (0.019)	1	0.534 (0.622)	1	0.689 (0.622)	Time
(0.8, 0.2)	1	0.109 (0.076)	1	0.013 (0.018)	1	0.458 (0.601)	1	0.662 (0.636)	Time
(0.9, 0.1)	2	0.096 (0.066)	1	0.012 (0.016)	2	0.327 (0.541)	3	0.659 (0.673)	Time

Table 118. HC on NRP-G3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.105 (0.078)	1	0.023 (0.025)	2	0.335 (0.483)	2	0.601 (0.701)	Eval.
(0.2, 0.8)	2	0.098 (0.077)	1	0.019 (0.020)	3	0.332 (0.404)	3	0.599 (0.745)	Eval.
(0.3, 0.7)	2	0.110 (0.092)	1	0.019 (0.020)	3	0.367 (0.449)	3	0.640 (0.719)	Eval.
(0.4, 0.6)	1	0.109 (0.085)	1	0.017 (0.018)	1	0.366 (0.450)	1	0.640 (0.674)	Eval.
(0.5, 0.5)	1	0.115 (0.082)	1	0.017 (0.022)	1	0.380 (0.469)	1	0.690 (0.620)	Eval.
(0.6, 0.4)	1	0.113 (0.079)	1	0.013 (0.018)	1	0.458 (0.521)	1	0.662 (0.636)	Eval.
(0.7, 0.3)	2	0.112 (0.079)	1	0.013 (0.018)	3	0.513 (0.601)	4	0.662 (0.636)	Eval.
(0.8, 0.2)	2	0.100 (0.072)	1	0.012 (0.016)	3	0.412 (0.541)	4	0.596 (0.673)	Eval.
(0.9, 0.1)	2	0.100 (0.070)	1	0.015 (0.019)	2	0.329 (0.540)	3	0.732 (0.671)	Eval.
(0.1, 0.9)	1	0.101 (0.070)	1	0.019 (0.023)	2	0.332 (0.466)	2	0.599 (0.668)	Time
(0.2, 0.8)	2	0.098 (0.076)	1	0.017 (0.019)	3	0.331 (0.405)	3	0.598 (0.705)	Time
(0.3, 0.7)	2	0.099 (0.077)	1	0.017 (0.018)	3	0.331 (0.405)	3	0.598 (0.705)	Time
(0.4, 0.6)	2	0.100 (0.072)	1	0.015 (0.017)	3	0.329 (0.406)	3	0.598 (0.671)	Time
(0.5, 0.5)	2	0.104 (0.079)	1	0.015 (0.020)	3	0.338 (0.416)	4	0.613 (0.662)	Time
(0.6, 0.4)	1	0.104 (0.080)	1	0.012 (0.017)	1	0.422 (0.481)	1	0.612 (0.664)	Time
(0.7, 0.3)	2	0.101 (0.077)	1	0.012 (0.016)	3	0.412 (0.541)	3	0.596 (0.673)	Time
(0.8, 0.2)	2	0.100 (0.077)	1	0.012 (0.016)	3	0.412 (0.541)	4	0.659 (0.673)	Time
(0.9, 0.1)	2	0.100 (0.074)	1	0.015 (0.019)	2	0.329 (0.517)	3	0.732 (0.671)	Time



Table 119. RS on NRP-G3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.100 (0.078)	1	0.012 (0.016)	1	0.327 (0.469)	1	0.659 (0.673)	Eval.
(0.2, 0.8)	1	0.103 (0.082)	1	0.012 (0.016)	1	0.327 (0.407)	1	0.596 (0.696)	Eval.
(0.3, 0.7)	2	0.105 (0.088)	1	0.012 (0.016)	1	0.327 (0.407)	1	0.596 (0.714)	Eval.
(0.4, 0.6)	2	0.105 (0.088)	1	0.012 (0.018)	1	0.327 (0.407)	1	0.596 (0.741)	Eval.
(0.5, 0.5)	3	0.106 (0.095)	1	0.012 (0.018)	2	0.292 (0.407)	1	0.596 (0.751)	Eval.
(0.6, 0.4)	2	0.110 (0.099)	1	0.012 (0.018)	2	0.289 (0.409)	1	0.575 (0.766)	Eval.
(0.7, 0.3)	2	0.112 (0.099)	1	0.013 (0.018)	3	0.276 (0.428)	1	0.589 (0.788)	Eval.
(0.8, 0.2)	2	0.122 (0.107)	1	0.014 (0.020)	2	0.284 (0.475)	1	0.616 (0.786)	Eval.
(0.9, 0.1)	2	0.118 (0.105)	1	0.014 (0.020)	2	0.277 (0.487)	1	0.528 (0.786)	Eval.
(0.1, 0.9)	1	0.122 (0.110)	1	0.014 (0.020)	1	0.277 (0.482)	1	0.513 (0.786)	Time
(0.2, 0.8)	1	0.128 (0.117)	1	0.016 (0.021)	1	0.288 (0.497)	1	0.534 (0.777)	Time
(0.3, 0.7)	2	0.130 (0.124)	1	0.016 (0.025)	1	0.276 (0.495)	1	0.534 (0.777)	Time
(0.4, 0.6)	2	0.132 (0.132)	1	0.016 (0.027)	1	0.265 (0.499)	1	0.534 (0.777)	Time
(0.5, 0.5)	3	0.136 (0.134)	1	0.016 (0.040)	2	0.257 (0.508)	1	0.476 (0.786)	Time
(0.6, 0.4)	3	0.137 (0.133)	1	0.016 (0.075)	2	0.251 (0.513)	1	0.476 (0.796)	Time
(0.7, 0.3)	2	0.133 (0.132)	1	0.010 (0.069)	3	0.240 (0.490)	1	0.395 (0.817)	Time
(0.8, 0.2)	2	0.131 (0.129)	1	0.009 (0.066)	3	0.232 (0.499)	1	0.374 (0.831)	Time
(0.9, 0.1)	2	0.136 (0.125)	1	0.016 (0.070)	2	0.228 (0.505)	1	0.378 (0.837)	Time

Table 120. SA on NRP-G3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.135 (0.133)	2	0.014 (0.076)	2	0.235 (0.479)	1	0.377 (0.845)	Eval.
(0.2, 0.8)	2	0.133 (0.140)	2	0.009 (0.084)	2	0.241 (0.388)	1	0.376 (0.850)	Eval.
(0.3, 0.7)	3	0.137 (0.148)	2	0.013 (0.105)	2	0.250 (0.394)	1	0.357 (0.847)	Eval.
(0.4, 0.6)	3	0.149 (0.156)	2	0.014 (0.125)	2	0.259 (0.391)	1	0.357 (0.847)	Eval.
(0.5, 0.5)	4	0.158 (0.166)	2	0.014 (0.148)	3	0.268 (0.412)	1	0.359 (0.845)	Eval.
(0.6, 0.4)	3	0.165 (0.165)	2	0.015 (0.154)	3	0.274 (0.427)	1	0.352 (0.848)	Eval.
(0.7, 0.3)	3	0.165 (0.163)	2	0.014 (0.150)	4	0.268 (0.427)	1	0.336 (0.858)	Eval.
(0.8, 0.2)	2	0.165 (0.160)	1	0.014 (0.147)	2	0.262 (0.434)	1	0.333 (0.861)	Eval.
(0.9, 0.1)	2	0.164 (0.167)	1	0.015 (0.143)	2	0.257 (0.442)	1	0.332 (0.870)	Eval.
(0.1, 0.9)	2	0.167 (0.166)	2	0.015 (0.156)	2	0.264 (0.442)	1	0.325 (0.870)	Time
(0.2, 0.8)	2	0.166 (0.172)	2	0.017 (0.167)	2	0.270 (0.441)	1	0.310 (0.871)	Time
(0.3, 0.7)	3	0.168 (0.175)	2	0.017 (0.180)	2	0.272 (0.438)	1	0.299 (0.871)	Time
(0.4, 0.6)	3	0.169 (0.176)	2	0.016 (0.193)	2	0.267 (0.436)	1	0.291 (0.873)	Time
(0.5, 0.5)	4	0.171 (0.174)	2	0.016 (0.191)	3	0.263 (0.367)	1	0.281 (0.877)	Time
(0.6, 0.4)	4	0.176 (0.168)	2	0.016 (0.187)	3	0.259 (0.369)	1	0.273 (0.882)	Time
(0.7, 0.3)	3	0.174 (0.164)	2	0.014 (0.183)	4	0.256 (0.369)	1	0.264 (0.889)	Time
(0.8, 0.2)	2	0.169 (0.163)	1	0.014 (0.180)	3	0.256 (0.281)	1	0.256 (0.891)	Time
(0.9, 0.1)	2	0.169 (0.169)	1	0.016 (0.179)	2	0.258 (0.270)	1	0.258 (0.892)	Time

Table 121. SOGA on NRP-G4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.011 (0.032)	1	0.011 (0.000)	2	0.845 (0.406)	2	0.845 (0.406)	Eval.
(0.2, 0.8)	2	0.128 (0.207)	1	0.040 (0.040)	3	0.747 (0.579)	3	0.747 (0.579)	Eval.
(0.3, 0.7)	2	0.173 (0.346)	1	0.033 (0.061)	3	0.834 (0.584)	3	0.834 (0.584)	Eval.
(0.4, 0.6)	2	0.150 (0.237)	1	0.019 (0.041)	3	0.654 (0.510)	3	0.654 (0.602)	Eval.
(0.5, 0.5)	2	0.201 (0.189)	1	0.016 (0.034)	3	0.727 (0.641)	3	0.727 (0.666)	Eval.
(0.6, 0.4)	1	0.188 (0.148)	1	0.029 (0.030)	1	0.640 (0.619)	1	0.705 (0.619)	Eval.
(0.7, 0.3)	2	0.147 (0.110)	1	0.024 (0.033)	3	0.518 (0.443)	4	0.695 (0.624)	Eval.
(0.8, 0.2)	2	0.113 (0.077)	1	0.012 (0.019)	3	0.332 (0.417)	4	0.707 (0.668)	Eval.
(0.9, 0.1)	2	0.101 (0.070)	1	0.012 (0.015)	2	0.297 (0.365)	3	0.669 (0.696)	Eval.
(0.1, 0.9)	1	0.103 (0.088)	1	0.019 (0.023)	2	0.303 (0.450)	2	0.649 (0.744)	Time
(0.2, 0.8)	2	0.106 (0.094)	1	0.010 (0.025)	3	0.326 (0.384)	3	0.603 (0.793)	Time
(0.3, 0.7)	2	0.117 (0.095)	1	0.010 (0.026)	3	0.346 (0.276)	3	0.541 (0.784)	Time
(0.4, 0.6)	2	0.127 (0.111)	1	0.011 (0.024)	3	0.367 (0.345)	3	0.574 (0.689)	Time
(0.5, 0.5)	2	0.137 (0.110)	1	0.024 (0.025)	3	0.390 (0.457)	3	0.695 (0.677)	Time
(0.6, 0.4)	2	0.143 (0.110)	1	0.024 (0.028)	3	0.390 (0.457)	3	0.695 (0.624)	Time
(0.7, 0.3)	2	0.127 (0.089)	1	0.017 (0.025)	3	0.371 (0.443)	4	0.666 (0.629)	Time
(0.8, 0.2)	2	0.118 (0.081)	1	0.013 (0.017)	3	0.340 (0.418)	4	0.643 (0.652)	Time
(0.9, 0.1)	2	0.111 (0.076)	1	0.013 (0.016)	2	0.325 (0.400)	3	0.708 (0.667)	Time

Table 122. HC on NRP-G4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.117 (0.089)	1	0.021 (0.025)	2	0.331 (0.469)	2	0.619 (0.674)	Eval.
(0.2, 0.8)	2	0.113 (0.077)	1	0.021 (0.025)	3	0.331 (0.312)	3	0.603 (0.719)	Eval.
(0.3, 0.7)	2	0.122 (0.083)	1	0.010 (0.026)	3	0.346 (0.325)	3	0.630 (0.707)	Eval.
(0.4, 0.6)	2	0.124 (0.086)	1	0.022 (0.026)	3	0.346 (0.325)	4	0.630 (0.659)	Eval.
(0.5, 0.5)	2	0.134 (0.092)	1	0.024 (0.027)	3	0.367 (0.440)	4	0.669 (0.639)	Eval.
(0.6, 0.4)	2	0.124 (0.088)	1	0.016 (0.019)	3	0.349 (0.417)	3	0.627 (0.651)	Eval.
(0.7, 0.3)	2	0.121 (0.086)	1	0.016 (0.019)	3	0.341 (0.417)	4	0.644 (0.651)	Eval.
(0.8, 0.2)	2	0.113 (0.082)	1	0.013 (0.016)	3	0.325 (0.400)	4	0.708 (0.667)	Eval.
(0.9, 0.1)	2	0.112 (0.080)	1	0.014 (0.018)	2	0.326 (0.400)	3	0.708 (0.666)	Eval.
(0.1, 0.9)	1	0.111 (0.080)	1	0.015 (0.019)	2	0.327 (0.314)	2	0.708 (0.665)	Time
(0.2, 0.8)	2	0.114 (0.078)	1	0.021 (0.025)	4	0.331 (0.312)	3	0.619 (0.674)	Time
(0.3, 0.7)	2	0.117 (0.082)	1	0.021 (0.025)	3	0.331 (0.312)	3	0.603 (0.674)	Time
(0.4, 0.6)	2	0.119 (0.083)	1	0.021 (0.025)	3	0.331 (0.312)	3	0.603 (0.674)	Time
(0.5, 0.5)	2	0.120 (0.091)	1	0.016 (0.019)	3	0.341 (0.328)	4	0.627 (0.651)	Time
(0.6, 0.4)	1	0.122 (0.091)	1	0.016 (0.019)	1	0.341 (0.417)	1	0.644 (0.651)	Time
(0.7, 0.3)	2	0.114 (0.087)	1	0.014 (0.018)	3	0.326 (0.400)	4	0.616 (0.666)	Time
(0.8, 0.2)	2	0.114 (0.087)	1	0.014 (0.018)	3	0.326 (0.400)	4	0.708 (0.666)	Time
(0.9, 0.1)	2	0.112 (0.084)	1	0.014 (0.018)	2	0.326 (0.314)	3	0.708 (0.666)	Time

Table 123. RS on NRP-G4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.114 (0.087)	1	0.014 (0.018)	1	0.326 (0.314)	1	0.708 (0.666)	Eval.
(0.2, 0.8)	1	0.114 (0.093)	1	0.013 (0.020)	1	0.325 (0.314)	1	0.616 (0.676)	Eval.
(0.3, 0.7)	1	0.117 (0.097)	1	0.013 (0.020)	1	0.325 (0.314)	1	0.616 (0.680)	Eval.
(0.4, 0.6)	3	0.120 (0.100)	1	0.013 (0.020)	2	0.325 (0.267)	1	0.600 (0.707)	Eval.
(0.5, 0.5)	2	0.120 (0.104)	1	0.013 (0.020)	2	0.321 (0.267)	1	0.600 (0.726)	Eval.
(0.6, 0.4)	2	0.130 (0.114)	1	0.014 (0.021)	3	0.335 (0.279)	1	0.627 (0.713)	Eval.
(0.7, 0.3)	2	0.132 (0.113)	1	0.014 (0.022)	3	0.335 (0.279)	1	0.627 (0.747)	Eval.
(0.8, 0.2)	2	0.130 (0.106)	1	0.014 (0.022)	2	0.318 (0.279)	1	0.626 (0.783)	Eval.
(0.9, 0.1)	2	0.135 (0.115)	1	0.015 (0.023)	2	0.320 (0.296)	1	0.570 (0.779)	Eval.
(0.1, 0.9)	1	0.138 (0.121)	1	0.015 (0.023)	1	0.320 (0.296)	1	0.517 (0.779)	Time
(0.2, 0.8)	1	0.140 (0.125)	1	0.015 (0.023)	1	0.310 (0.296)	1	0.517 (0.774)	Time
(0.3, 0.7)	2	0.143 (0.131)	1	0.015 (0.023)	1	0.304 (0.296)	1	0.517 (0.772)	Time
(0.4, 0.6)	3	0.151 (0.141)	1	0.014 (0.022)	2	0.316 (0.308)	1	0.538 (0.771)	Time
(0.5, 0.5)	2	0.151 (0.143)	1	0.017 (0.049)	2	0.312 (0.308)	1	0.513 (0.771)	Time
(0.6, 0.4)	2	0.157 (0.141)	1	0.017 (0.092)	3	0.305 (0.308)	1	0.513 (0.771)	Time
(0.7, 0.3)	2	0.157 (0.137)	1	0.017 (0.090)	3	0.298 (0.308)	1	0.392 (0.783)	Time
(0.8, 0.2)	2	0.155 (0.130)	1	0.017 (0.087)	3	0.293 (0.290)	1	0.383 (0.797)	Time
(0.9, 0.1)	2	0.151 (0.137)	1	0.017 (0.084)	2	0.287 (0.298)	1	0.383 (0.814)	Time

Table 124. SA on NRP-G4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.155 (0.141)	2	0.017 (0.092)	2	0.293 (0.295)	1	0.383 (0.818)	Eval.
(0.2, 0.8)	2	0.157 (0.144)	2	0.017 (0.105)	2	0.298 (0.200)	1	0.383 (0.821)	Eval.
(0.3, 0.7)	2	0.173 (0.159)	2	0.019 (0.140)	2	0.327 (0.201)	1	0.406 (0.808)	Eval.
(0.4, 0.6)	3	0.176 (0.166)	2	0.019 (0.152)	3	0.324 (0.184)	1	0.401 (0.814)	Eval.
(0.5, 0.5)	3	0.179 (0.163)	2	0.019 (0.175)	3	0.321 (0.173)	1	0.397 (0.821)	Eval.
(0.6, 0.4)	3	0.183 (0.164)	2	0.024 (0.175)	4	0.323 (0.171)	1	0.379 (0.831)	Eval.
(0.7, 0.3)	3	0.185 (0.161)	2	0.024 (0.171)	4	0.320 (0.177)	1	0.369 (0.840)	Eval.
(0.8, 0.2)	2	0.181 (0.158)	1	0.024 (0.167)	2	0.315 (0.183)	1	0.358 (0.842)	Eval.
(0.9, 0.1)	2	0.180 (0.160)	1	0.024 (0.164)	2	0.312 (0.191)	1	0.348 (0.850)	Eval.
(0.1, 0.9)	2	0.195 (0.176)	2	0.026 (0.188)	2	0.338 (0.202)	1	0.373 (0.838)	Time
(0.2, 0.8)	2	0.198 (0.179)	2	0.026 (0.201)	2	0.343 (0.200)	1	0.370 (0.837)	Time
(0.3, 0.7)	3	0.199 (0.183)	2	0.026 (0.216)	2	0.341 (0.197)	1	0.355 (0.837)	Time
(0.4, 0.6)	4	0.201 (0.185)	2	0.025 (0.229)	3	0.337 (0.195)	1	0.342 (0.838)	Time
(0.5, 0.5)	3	0.202 (0.183)	2	0.024 (0.227)	3	0.334 (0.195)	1	0.333 (0.842)	Time
(0.6, 0.4)	3	0.202 (0.181)	2	0.023 (0.223)	4	0.333 (0.190)	1	0.324 (0.848)	Time
(0.7, 0.3)	3	0.201 (0.177)	2	0.023 (0.219)	4	0.329 (0.185)	1	0.313 (0.854)	Time
(0.8, 0.2)	2	0.200 (0.176)	1	0.022 (0.216)	2	0.326 (0.191)	1	0.302 (0.862)	Time
(0.9, 0.1)	2	0.206 (0.184)	1	0.024 (0.221)	2	0.335 (0.205)	1	0.305 (0.858)	Time

Table 125. SOGA on NRP-M1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.013 (0.016)	2	0.137 (0.000)	3	0.880 (0.698)	3	0.880 (0.698)	Eval.
(0.2, 0.8)	1	0.074 (0.132)	2	0.160 (0.097)	3	0.413 (0.339)	3	0.440 (0.587)	Eval.
(0.3, 0.7)	1	0.084 (0.140)	1	0.102 (0.149)	1	0.435 (0.218)	2	0.435 (0.736)	Eval.
(0.4, 0.6)	1	0.059 (0.105)	1	0.123 (0.080)	1	0.363 (0.319)	2	0.523 (0.780)	Eval.
(0.5, 0.5)	1	0.053 (0.077)	2	0.090 (0.076)	3	0.415 (0.385)	4	0.544 (0.718)	Eval.
(0.6, 0.4)	1	0.049 (0.059)	2	0.073 (0.078)	3	0.365 (0.358)	3	0.521 (0.755)	Eval.
(0.7, 0.3)	1	0.034 (0.051)	2	0.064 (0.068)	3	0.424 (0.340)	4	0.528 (0.681)	Eval.
(0.8, 0.2)	1	0.031 (0.049)	2	0.064 (0.044)	1	0.319 (0.408)	3	0.632 (0.681)	Eval.
(0.9, 0.1)	1	0.034 (0.054)	3	0.063 (0.061)	2	0.324 (0.418)	4	0.636 (0.654)	Eval.
(0.1, 0.9)	1	0.036 (0.066)	2	0.077 (0.058)	3	0.244 (0.545)	3	0.678 (0.756)	Time
(0.2, 0.8)	1	0.026 (0.071)	2	0.082 (0.064)	3	0.268 (0.484)	3	0.631 (0.841)	Time
(0.3, 0.7)	1	0.034 (0.068)	1	0.079 (0.065)	1	0.267 (0.367)	1	0.633 (0.733)	Time
(0.4, 0.6)	1	0.044 (0.069)	1	0.081 (0.070)	1	0.267 (0.367)	1	0.511 (0.733)	Time
(0.5, 0.5)	1	0.044 (0.067)	2	0.085 (0.070)	3	0.385 (0.369)	3	0.508 (0.738)	Time
(0.6, 0.4)	1	0.049 (0.066)	2	0.084 (0.080)	3	0.385 (0.492)	3	0.631 (0.738)	Time
(0.7, 0.3)	1	0.044 (0.064)	2	0.082 (0.078)	3	0.384 (0.493)	3	0.630 (0.740)	Time
(0.8, 0.2)	1	0.040 (0.065)	2	0.074 (0.079)	3	0.411 (0.534)	3	0.678 (0.686)	Time
(0.9, 0.1)	1	0.042 (0.065)	3	0.076 (0.063)	2	0.386 (0.491)	4	0.669 (0.614)	Time

Table 126. HC on NRP-M1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.044 (0.069)	2	0.081 (0.065)	3	0.389 (0.489)	3	0.634 (0.733)	Eval.
(0.2, 0.8)	1	0.047 (0.071)	1	0.079 (0.065)	1	0.389 (0.489)	1	0.633 (0.733)	Eval.
(0.3, 0.7)	2	0.044 (0.070)	1	0.078 (0.065)	3	0.387 (0.490)	3	0.632 (0.736)	Eval.
(0.4, 0.6)	1	0.045 (0.071)	1	0.076 (0.065)	2	0.386 (0.491)	2	0.632 (0.737)	Eval.
(0.5, 0.5)	1	0.048 (0.071)	1	0.074 (0.070)	2	0.385 (0.492)	3	0.631 (0.738)	Eval.
(0.6, 0.4)	1	0.048 (0.072)	2	0.075 (0.078)	3	0.384 (0.493)	3	0.630 (0.706)	Eval.
(0.7, 0.3)	1	0.044 (0.066)	2	0.069 (0.077)	3	0.381 (0.495)	3	0.629 (0.619)	Eval.
(0.8, 0.2)	1	0.040 (0.066)	2	0.069 (0.074)	3	0.406 (0.520)	3	0.666 (0.619)	Eval.
(0.9, 0.1)	1	0.041 (0.068)	3	0.072 (0.073)	2	0.383 (0.524)	4	0.752 (0.617)	Eval.
(0.1, 0.9)	1	0.041 (0.070)	2	0.075 (0.068)	3	0.385 (0.492)	3	0.669 (0.704)	Time
(0.2, 0.8)	2	0.043 (0.070)	1	0.074 (0.065)	3	0.385 (0.492)	3	0.631 (0.738)	Time
(0.3, 0.7)	2	0.045 (0.072)	1	0.073 (0.065)	3	0.384 (0.493)	3	0.630 (0.739)	Time
(0.4, 0.6)	1	0.047 (0.073)	1	0.073 (0.070)	1	0.384 (0.493)	2	0.668 (0.740)	Time
(0.5, 0.5)	1	0.045 (0.076)	1	0.070 (0.068)	2	0.382 (0.494)	3	0.667 (0.708)	Time
(0.6, 0.4)	1	0.043 (0.073)	2	0.068 (0.077)	3	0.406 (0.496)	4	0.666 (0.620)	Time
(0.7, 0.3)	1	0.041 (0.069)	2	0.066 (0.074)	3	0.405 (0.522)	4	0.666 (0.621)	Time
(0.8, 0.2)	1	0.040 (0.067)	2	0.064 (0.071)	3	0.444 (0.501)	3	0.722 (0.635)	Time
(0.9, 0.1)	1	0.039 (0.067)	3	0.066 (0.071)	2	0.391 (0.513)	4	0.724 (0.634)	Time

Table 127. RS on NRP-M1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.042 (0.071)	1	0.066 (0.071)	1	0.391 (0.513)	1	0.722 (0.634)	Eval.
(0.2, 0.8)	1	0.042 (0.074)	1	0.067 (0.074)	1	0.380 (0.521)	1	0.666 (0.744)	Eval.
(0.3, 0.7)	1	0.043 (0.077)	1	0.068 (0.074)	1	0.379 (0.484)	1	0.666 (0.745)	Eval.
(0.4, 0.6)	2	0.047 (0.079)	1	0.076 (0.075)	1	0.379 (0.484)	1	0.628 (0.745)	Eval.
(0.5, 0.5)	2	0.049 (0.084)	1	0.075 (0.079)	1	0.379 (0.497)	1	0.627 (0.761)	Eval.
(0.6, 0.4)	3	0.050 (0.090)	1	0.075 (0.079)	2	0.379 (0.497)	1	0.627 (0.787)	Eval.
(0.7, 0.3)	2	0.052 (0.088)	1	0.075 (0.075)	2	0.378 (0.497)	1	0.627 (0.812)	Eval.
(0.8, 0.2)	2	0.048 (0.084)	1	0.071 (0.075)	3	0.377 (0.498)	1	0.541 (0.830)	Eval.
(0.9, 0.1)	1	0.049 (0.084)	1	0.068 (0.075)	1	0.277 (0.510)	1	0.503 (0.843)	Eval.
(0.1, 0.9)	1	0.050 (0.091)	1	0.074 (0.079)	1	0.255 (0.503)	1	0.503 (0.833)	Time
(0.2, 0.8)	1	0.052 (0.096)	1	0.075 (0.079)	1	0.254 (0.498)	1	0.503 (0.832)	Time
(0.3, 0.7)	2	0.054 (0.106)	1	0.079 (0.090)	1	0.273 (0.538)	1	0.542 (0.835)	Time
(0.4, 0.6)	2	0.054 (0.112)	1	0.078 (0.090)	1	0.272 (0.541)	1	0.496 (0.846)	Time
(0.5, 0.5)	2	0.055 (0.117)	1	0.077 (0.090)	1	0.272 (0.550)	1	0.434 (0.849)	Time
(0.6, 0.4)	2	0.055 (0.113)	1	0.075 (0.090)	1	0.256 (0.560)	1	0.433 (0.859)	Time
(0.7, 0.3)	2	0.056 (0.111)	1	0.076 (0.090)	2	0.239 (0.574)	1	0.408 (0.864)	Time
(0.8, 0.2)	2	0.058 (0.116)	1	0.080 (0.095)	3	0.239 (0.612)	1	0.429 (0.857)	Time
(0.9, 0.1)	1	0.057 (0.117)	1	0.082 (0.095)	1	0.231 (0.476)	1	0.430 (0.855)	Time

Table 128. SA on NRP-M1 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.058 (0.120)	2	0.080 (0.095)	2	0.239 (0.473)	1	0.429 (0.857)	Eval.
(0.2, 0.8)	1	0.059 (0.126)	1	0.080 (0.095)	1	0.242 (0.471)	1	0.325 (0.863)	Eval.
(0.3, 0.7)	1	0.059 (0.133)	1	0.080 (0.095)	1	0.237 (0.469)	1	0.286 (0.866)	Eval.
(0.4, 0.6)	3	0.063 (0.139)	2	0.080 (0.095)	2	0.230 (0.467)	1	0.286 (0.871)	Eval.
(0.5, 0.5)	3	0.062 (0.141)	2	0.079 (0.098)	2	0.225 (0.465)	1	0.285 (0.878)	Eval.
(0.6, 0.4)	4	0.061 (0.140)	2	0.077 (0.096)	3	0.217 (0.466)	1	0.284 (0.886)	Eval.
(0.7, 0.3)	2	0.061 (0.137)	1	0.076 (0.095)	2	0.208 (0.471)	1	0.283 (0.894)	Eval.
(0.8, 0.2)	1	0.057 (0.135)	1	0.073 (0.096)	1	0.201 (0.477)	1	0.260 (0.904)	Eval.
(0.9, 0.1)	1	0.062 (0.138)	1	0.079 (0.095)	1	0.201 (0.481)	1	0.246 (0.905)	Eval.
(0.1, 0.9)	2	0.071 (0.163)	2	0.090 (0.112)	2	0.239 (0.560)	1	0.274 (0.891)	Time
(0.2, 0.8)	2	0.072 (0.169)	2	0.088 (0.118)	2	0.240 (0.558)	1	0.264 (0.893)	Time
(0.3, 0.7)	3	0.071 (0.172)	2	0.086 (0.124)	2	0.233 (0.557)	1	0.253 (0.898)	Time
(0.4, 0.6)	3	0.069 (0.173)	2	0.083 (0.131)	2	0.226 (0.557)	1	0.240 (0.902)	Time
(0.5, 0.5)	3	0.070 (0.172)	2	0.082 (0.131)	2	0.221 (0.556)	1	0.230 (0.906)	Time
(0.6, 0.4)	4	0.069 (0.169)	2	0.080 (0.130)	3	0.214 (0.560)	1	0.219 (0.914)	Time
(0.7, 0.3)	2	0.068 (0.166)	1	0.077 (0.124)	2	0.208 (0.507)	1	0.213 (0.921)	Time
(0.8, 0.2)	1	0.065 (0.162)	1	0.076 (0.126)	1	0.206 (0.436)	1	0.208 (0.926)	Time
(0.9, 0.1)	1	0.069 (0.167)	1	0.082 (0.122)	1	0.206 (0.438)	2	0.210 (0.924)	Time

Table 129. SOGA on NRP-M2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.022 (0.037)	2	0.254 (0.148)	3	1.000 (0.398)	3	0.602 (0.398)	Eval.
(0.2, 0.8)	2	0.089 (0.156)	1	0.102 (0.018)	3	0.650 (0.570)	3	0.650 (0.745)	Eval.
(0.3, 0.7)	2	0.096 (0.184)	1	0.068 (0.031)	3	0.635 (0.394)	3	0.635 (0.729)	Eval.
(0.4, 0.6)	2	0.095 (0.176)	1	0.037 (0.058)	3	0.646 (0.534)	3	0.646 (0.621)	Eval.
(0.5, 0.5)	2	0.111 (0.125)	1	0.022 (0.041)	3	0.624 (0.591)	3	0.666 (0.728)	Eval.
(0.6, 0.4)	2	0.112 (0.117)	1	0.020 (0.035)	3	0.627 (0.704)	3	0.688 (0.581)	Eval.
(0.7, 0.3)	2	0.085 (0.081)	1	0.015 (0.030)	3	0.371 (0.544)	4	0.686 (0.629)	Eval.
(0.8, 0.2)	2	0.070 (0.062)	1	0.009 (0.022)	3	0.319 (0.422)	4	0.696 (0.681)	Eval.
(0.9, 0.1)	2	0.060 (0.058)	1	0.013 (0.023)	3	0.172 (0.430)	4	0.670 (0.606)	Eval.
(0.1, 0.9)	1	0.055 (0.076)	2	0.015 (0.021)	3	0.188 (0.391)	3	0.698 (0.692)	Time
(0.2, 0.8)	2	0.046 (0.069)	1	0.015 (0.020)	3	0.188 (0.346)	3	0.594 (0.812)	Time
(0.3, 0.7)	2	0.054 (0.069)	1	0.015 (0.018)	3	0.188 (0.333)	3	0.503 (0.812)	Time
(0.4, 0.6)	1	0.064 (0.081)	1	0.016 (0.030)	1	0.321 (0.353)	1	0.487 (0.679)	Time
(0.5, 0.5)	1	0.073 (0.088)	1	0.016 (0.028)	1	0.361 (0.525)	1	0.664 (0.657)	Time
(0.6, 0.4)	2	0.082 (0.088)	1	0.014 (0.029)	3	0.359 (0.526)	3	0.663 (0.641)	Time
(0.7, 0.3)	2	0.085 (0.077)	1	0.014 (0.029)	3	0.371 (0.544)	4	0.686 (0.629)	Time
(0.8, 0.2)	2	0.067 (0.067)	1	0.011 (0.023)	3	0.300 (0.470)	4	0.697 (0.679)	Time
(0.9, 0.1)	2	0.065 (0.065)	1	0.014 (0.025)	3	0.187 (0.469)	4	0.729 (0.678)	Time

Table 130. HC on NRP-M2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.060 (0.075)	2	0.015 (0.021)	3	0.188 (0.377)	3	0.698 (0.677)	Eval.
(0.2, 0.8)	2	0.056 (0.072)	1	0.015 (0.021)	3	0.188 (0.377)	3	0.594 (0.692)	Eval.
(0.3, 0.7)	2	0.066 (0.073)	1	0.015 (0.021)	3	0.188 (0.377)	3	0.594 (0.692)	Eval.
(0.4, 0.6)	2	0.070 (0.071)	1	0.015 (0.026)	3	0.308 (0.377)	4	0.594 (0.677)	Eval.
(0.5, 0.5)	2	0.069 (0.073)	1	0.014 (0.028)	3	0.307 (0.469)	4	0.593 (0.678)	Eval.
(0.6, 0.4)	2	0.073 (0.074)	1	0.011 (0.025)	3	0.321 (0.470)	3	0.697 (0.679)	Eval.
(0.7, 0.3)	2	0.073 (0.072)	1	0.011 (0.025)	3	0.305 (0.470)	4	0.697 (0.679)	Eval.
(0.8, 0.2)	2	0.073 (0.072)	1	0.011 (0.025)	3	0.300 (0.470)	4	0.728 (0.679)	Eval.
(0.9, 0.1)	2	0.065 (0.065)	1	0.013 (0.026)	2	0.174 (0.436)	3	0.679 (0.700)	Eval.
(0.1, 0.9)	1	0.066 (0.073)	2	0.015 (0.026)	3	0.188 (0.468)	3	0.729 (0.677)	Time
(0.2, 0.8)	2	0.066 (0.073)	1	0.015 (0.026)	3	0.188 (0.468)	3	0.698 (0.677)	Time
(0.3, 0.7)	2	0.070 (0.073)	1	0.015 (0.026)	3	0.188 (0.468)	3	0.698 (0.677)	Time
(0.4, 0.6)	2	0.071 (0.072)	1	0.015 (0.029)	3	0.303 (0.468)	3	0.698 (0.677)	Time
(0.5, 0.5)	2	0.075 (0.076)	1	0.014 (0.028)	3	0.307 (0.469)	4	0.698 (0.678)	Time
(0.6, 0.4)	2	0.073 (0.075)	1	0.011 (0.025)	3	0.305 (0.470)	3	0.697 (0.679)	Time
(0.7, 0.3)	2	0.073 (0.075)	1	0.011 (0.025)	3	0.305 (0.470)	4	0.728 (0.679)	Time
(0.8, 0.2)	2	0.073 (0.075)	1	0.011 (0.025)	3	0.300 (0.470)	4	0.728 (0.679)	Time
(0.9, 0.1)	2	0.064 (0.066)	1	0.013 (0.025)	2	0.172 (0.430)	3	0.669 (0.704)	Time

Table 131. RS on NRP-M2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.068 (0.069)	1	0.011 (0.024)	1	0.205 (0.438)	1	0.678 (0.701)	Eval.
(0.2, 0.8)	1	0.068 (0.071)	1	0.011 (0.024)	1	0.202 (0.438)	1	0.678 (0.701)	Eval.
(0.3, 0.7)	2	0.073 (0.081)	1	0.011 (0.026)	1	0.207 (0.378)	1	0.697 (0.695)	Eval.
(0.4, 0.6)	2	0.074 (0.082)	1	0.013 (0.026)	2	0.197 (0.378)	1	0.697 (0.700)	Eval.
(0.5, 0.5)	2	0.077 (0.086)	1	0.013 (0.026)	2	0.189 (0.378)	1	0.687 (0.749)	Eval.
(0.6, 0.4)	2	0.081 (0.086)	1	0.013 (0.028)	3	0.185 (0.334)	1	0.592 (0.776)	Eval.
(0.7, 0.3)	2	0.081 (0.084)	1	0.013 (0.028)	3	0.185 (0.334)	1	0.592 (0.800)	Eval.
(0.8, 0.2)	2	0.081 (0.084)	1	0.013 (0.028)	3	0.185 (0.334)	1	0.592 (0.815)	Eval.
(0.9, 0.1)	1	0.078 (0.086)	1	0.013 (0.028)	1	0.185 (0.334)	1	0.592 (0.815)	Eval.
(0.1, 0.9)	1	0.081 (0.086)	1	0.013 (0.028)	1	0.185 (0.334)	1	0.501 (0.815)	Time
(0.2, 0.8)	1	0.083 (0.090)	1	0.015 (0.028)	1	0.185 (0.334)	1	0.501 (0.815)	Time
(0.3, 0.7)	2	0.084 (0.096)	1	0.015 (0.030)	1	0.185 (0.334)	1	0.456 (0.815)	Time
(0.4, 0.6)	2	0.085 (0.101)	1	0.015 (0.038)	1	0.185 (0.334)	1	0.456 (0.819)	Time
(0.5, 0.5)	3	0.093 (0.109)	1	0.016 (0.047)	2	0.194 (0.354)	1	0.484 (0.821)	Time
(0.6, 0.4)	2	0.094 (0.106)	1	0.015 (0.052)	3	0.187 (0.355)	1	0.483 (0.833)	Time
(0.7, 0.3)	2	0.092 (0.111)	1	0.008 (0.049)	3	0.188 (0.378)	1	0.506 (0.844)	Time
(0.8, 0.2)	2	0.091 (0.108)	1	0.008 (0.044)	3	0.184 (0.378)	1	0.473 (0.859)	Time
(0.9, 0.1)	2	0.097 (0.107)	1	0.018 (0.054)	2	0.192 (0.374)	2	0.359 (0.857)	Time

Table 132. SA on NRP-M2 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.101 (0.116)	2	0.016 (0.062)	2	0.197 (0.354)	1	0.369 (0.857)	Eval.
(0.2, 0.8)	2	0.096 (0.121)	2	0.010 (0.066)	2	0.196 (0.231)	1	0.365 (0.867)	Eval.
(0.3, 0.7)	1	0.095 (0.129)	1	0.011 (0.080)	1	0.198 (0.232)	1	0.363 (0.871)	Eval.
(0.4, 0.6)	3	0.097 (0.132)	2	0.013 (0.091)	3	0.199 (0.232)	1	0.363 (0.876)	Eval.
(0.5, 0.5)	3	0.097 (0.137)	2	0.013 (0.103)	3	0.198 (0.232)	1	0.345 (0.882)	Eval.
(0.6, 0.4)	2	0.100 (0.137)	1	0.016 (0.105)	3	0.197 (0.232)	1	0.338 (0.885)	Eval.
(0.7, 0.3)	2	0.102 (0.131)	1	0.017 (0.103)	3	0.194 (0.232)	1	0.300 (0.889)	Eval.
(0.8, 0.2)	2	0.099 (0.129)	1	0.017 (0.100)	3	0.192 (0.232)	1	0.280 (0.896)	Eval.
(0.9, 0.1)	1	0.097 (0.131)	1	0.016 (0.098)	1	0.189 (0.232)	1	0.262 (0.903)	Eval.
(0.1, 0.9)	2	0.099 (0.137)	2	0.017 (0.105)	2	0.191 (0.232)	1	0.248 (0.904)	Time
(0.2, 0.8)	2	0.102 (0.137)	2	0.017 (0.112)	2	0.194 (0.232)	1	0.240 (0.905)	Time
(0.3, 0.7)	2	0.105 (0.142)	2	0.017 (0.122)	2	0.194 (0.214)	1	0.230 (0.905)	Time
(0.4, 0.6)	4	0.125 (0.172)	2	0.020 (0.156)	3	0.230 (0.254)	1	0.265 (0.889)	Time
(0.5, 0.5)	3	0.125 (0.170)	2	0.020 (0.155)	3	0.227 (0.254)	1	0.257 (0.892)	Time
(0.6, 0.4)	2	0.127 (0.168)	1	0.020 (0.153)	3	0.226 (0.254)	1	0.248 (0.897)	Time
(0.7, 0.3)	2	0.127 (0.165)	1	0.020 (0.151)	3	0.225 (0.247)	1	0.242 (0.902)	Time
(0.8, 0.2)	2	0.125 (0.163)	1	0.020 (0.148)	3	0.224 (0.245)	1	0.242 (0.906)	Time
(0.9, 0.1)	2	0.125 (0.165)	1	0.020 (0.145)	2	0.224 (0.226)	2	0.242 (0.911)	Time

Table 133. SOGA on NRP-M3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.000 (0.000)	2	0.239 (0.000)	2	0.239 (0.761)	2	0.239 (0.761)	Eval.
(0.2, 0.8)	1	0.174 (0.200)	2	0.477 (0.238)	3	0.986 (0.748)	3	0.986 (0.761)	Eval.
(0.3, 0.7)	1	0.115 (0.261)	2	0.275 (0.412)	3	0.569 (0.431)	3	0.577 (0.431)	Eval.
(0.4, 0.6)	1	0.033 (0.109)	2	0.211 (0.258)	3	0.423 (0.406)	3	0.423 (0.780)	Eval.
(0.5, 0.5)	1	0.086 (0.118)	2	0.206 (0.260)	3	0.623 (0.613)	3	0.623 (0.785)	Eval.
(0.6, 0.4)	1	0.085 (0.120)	2	0.243 (0.250)	3	0.598 (0.753)	3	0.793 (0.790)	Eval.
(0.7, 0.3)	1	0.073 (0.101)	2	0.231 (0.211)	3	0.510 (0.496)	3	0.670 (0.661)	Eval.
(0.8, 0.2)	1	0.045 (0.068)	3	0.146 (0.097)	2	0.424 (0.576)	4	0.712 (0.720)	Eval.
(0.9, 0.1)	1	0.046 (0.070)	3	0.136 (0.108)	2	0.379 (0.563)	4	0.634 (0.745)	Eval.
(0.1, 0.9)	1	0.048 (0.077)	2	0.135 (0.131)	2	0.263 (0.595)	2	0.632 (0.858)	Time
(0.2, 0.8)	1	0.034 (0.067)	2	0.130 (0.129)	3	0.138 (0.472)	3	0.506 (0.865)	Time
(0.3, 0.7)	1	0.048 (0.076)	2	0.147 (0.146)	3	0.292 (0.493)	3	0.571 (0.847)	Time
(0.4, 0.6)	1	0.050 (0.075)	1	0.144 (0.151)	1	0.292 (0.500)	1	0.434 (0.847)	Time
(0.5, 0.5)	1	0.056 (0.082)	2	0.143 (0.181)	3	0.291 (0.501)	3	0.575 (0.709)	Time
(0.6, 0.4)	1	0.060 (0.082)	2	0.155 (0.181)	3	0.433 (0.425)	3	0.575 (0.709)	Time
(0.7, 0.3)	1	0.060 (0.082)	2	0.159 (0.158)	3	0.433 (0.567)	3	0.575 (0.709)	Time
(0.8, 0.2)	1	0.056 (0.080)	3	0.155 (0.123)	2	0.433 (0.643)	4	0.716 (0.709)	Time
(0.9, 0.1)	1	0.055 (0.080)	3	0.155 (0.123)	2	0.291 (0.643)	4	0.716 (0.709)	Time

Table 134. HC on NRP-M3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.054 (0.083)	2	0.148 (0.150)	3	0.295 (0.618)	2	0.718 (0.705)	Eval.
(0.2, 0.8)	1	0.049 (0.078)	2	0.148 (0.150)	3	0.295 (0.618)	3	0.696 (0.705)	Eval.
(0.3, 0.7)	1	0.051 (0.083)	2	0.146 (0.151)	3	0.293 (0.641)	3	0.695 (0.707)	Eval.
(0.4, 0.6)	1	0.052 (0.082)	2	0.143 (0.151)	3	0.433 (0.643)	3	0.575 (0.709)	Eval.
(0.5, 0.5)	1	0.056 (0.087)	2	0.143 (0.181)	3	0.433 (0.621)	3	0.575 (0.709)	Eval.
(0.6, 0.4)	1	0.059 (0.086)	2	0.154 (0.142)	3	0.428 (0.637)	3	0.709 (0.712)	Eval.
(0.7, 0.3)	1	0.059 (0.086)	2	0.154 (0.143)	3	0.428 (0.561)	3	0.709 (0.712)	Eval.
(0.8, 0.2)	1	0.056 (0.086)	2	0.154 (0.129)	2	0.428 (0.637)	3	0.709 (0.712)	Eval.
(0.9, 0.1)	1	0.049 (0.076)	2	0.136 (0.108)	1	0.379 (0.563)	3	0.627 (0.745)	Eval.
(0.1, 0.9)	1	0.043 (0.076)	2	0.136 (0.119)	3	0.379 (0.563)	3	0.628 (0.745)	Time
(0.2, 0.8)	1	0.042 (0.072)	2	0.126 (0.132)	3	0.379 (0.563)	3	0.628 (0.745)	Time
(0.3, 0.7)	1	0.042 (0.076)	2	0.125 (0.132)	3	0.379 (0.563)	3	0.627 (0.745)	Time
(0.4, 0.6)	1	0.049 (0.076)	2	0.125 (0.132)	3	0.379 (0.563)	3	0.627 (0.745)	Time
(0.5, 0.5)	1	0.049 (0.076)	2	0.136 (0.138)	3	0.379 (0.563)	4	0.627 (0.745)	Time
(0.6, 0.4)	1	0.052 (0.076)	2	0.136 (0.125)	3	0.379 (0.563)	4	0.627 (0.745)	Time
(0.7, 0.3)	1	0.052 (0.076)	2	0.136 (0.127)	3	0.379 (0.497)	3	0.627 (0.745)	Time
(0.8, 0.2)	1	0.052 (0.076)	2	0.136 (0.127)	2	0.379 (0.563)	3	0.627 (0.621)	Time
(0.9, 0.1)	1	0.049 (0.076)	2	0.136 (0.114)	1	0.379 (0.563)	3	0.634 (0.621)	Time



Table 135. RS on NRP-M3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.052 (0.076)	1	0.136 (0.114)	1	0.379 (0.563)	1	0.627 (0.745)	Eval.
(0.2, 0.8)	1	0.052 (0.082)	1	0.136 (0.111)	1	0.379 (0.563)	1	0.627 (0.745)	Eval.
(0.3, 0.7)	1	0.051 (0.083)	1	0.135 (0.108)	1	0.254 (0.564)	1	0.627 (0.746)	Eval.
(0.4, 0.6)	1	0.053 (0.088)	1	0.134 (0.108)	1	0.253 (0.565)	1	0.627 (0.747)	Eval.
(0.5, 0.5)	1	0.049 (0.087)	1	0.131 (0.108)	1	0.250 (0.567)	1	0.625 (0.834)	Eval.
(0.6, 0.4)	2	0.055 (0.086)	3	0.130 (0.108)	1	0.250 (0.549)	3	0.606 (0.843)	Eval.
(0.7, 0.3)	2	0.056 (0.086)	3	0.130 (0.108)	1	0.250 (0.567)	3	0.500 (0.849)	Eval.
(0.8, 0.2)	1	0.051 (0.086)	3	0.130 (0.108)	2	0.250 (0.548)	4	0.500 (0.854)	Eval.
(0.9, 0.1)	1	0.056 (0.097)	2	0.148 (0.123)	1	0.187 (0.619)	3	0.566 (0.839)	Eval.
(0.1, 0.9)	1	0.058 (0.097)	1	0.145 (0.123)	1	0.173 (0.500)	1	0.566 (0.847)	Time
(0.2, 0.8)	1	0.063 (0.098)	1	0.144 (0.123)	1	0.165 (0.500)	1	0.566 (0.853)	Time
(0.3, 0.7)	1	0.064 (0.107)	1	0.145 (0.124)	1	0.161 (0.505)	1	0.571 (0.855)	Time
(0.4, 0.6)	1	0.064 (0.109)	1	0.143 (0.124)	1	0.156 (0.505)	1	0.434 (0.855)	Time
(0.5, 0.5)	1	0.063 (0.109)	2	0.141 (0.124)	1	0.149 (0.506)	2	0.428 (0.856)	Time
(0.6, 0.4)	1	0.062 (0.105)	2	0.138 (0.124)	1	0.142 (0.504)	3	0.426 (0.859)	Time
(0.7, 0.3)	1	0.059 (0.102)	2	0.134 (0.125)	1	0.139 (0.509)	3	0.424 (0.863)	Time
(0.8, 0.2)	1	0.057 (0.100)	3	0.132 (0.122)	2	0.137 (0.509)	4	0.424 (0.864)	Time
(0.9, 0.1)	1	0.063 (0.106)	2	0.135 (0.121)	1	0.141 (0.506)	3	0.428 (0.859)	Time

Table 136. SA on NRP-M3 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.060 (0.105)	2	0.135 (0.122)	2	0.140 (0.507)	1	0.402 (0.861)	Eval.
(0.2, 0.8)	1	0.059 (0.106)	1	0.135 (0.122)	1	0.139 (0.509)	1	0.280 (0.864)	Eval.
(0.3, 0.7)	1	0.061 (0.110)	1	0.137 (0.121)	1	0.138 (0.509)	1	0.280 (0.864)	Eval.
(0.4, 0.6)	1	0.061 (0.110)	1	0.135 (0.120)	1	0.136 (0.511)	1	0.278 (0.867)	Eval.
(0.5, 0.5)	1	0.060 (0.113)	1	0.134 (0.118)	1	0.135 (0.521)	1	0.280 (0.868)	Eval.
(0.6, 0.4)	1	0.067 (0.128)	1	0.151 (0.131)	1	0.152 (0.601)	1	0.320 (0.850)	Eval.
(0.7, 0.3)	1	0.066 (0.123)	1	0.146 (0.128)	1	0.147 (0.603)	1	0.318 (0.853)	Eval.
(0.8, 0.2)	1	0.062 (0.121)	3	0.143 (0.131)	2	0.146 (0.439)	4	0.317 (0.854)	Eval.
(0.9, 0.1)	1	0.069 (0.127)	2	0.147 (0.138)	1	0.152 (0.436)	3	0.322 (0.848)	Eval.
(0.1, 0.9)	2	0.067 (0.127)	2	0.146 (0.135)	2	0.150 (0.437)	1	0.312 (0.850)	Time
(0.2, 0.8)	1	0.066 (0.127)	1	0.144 (0.133)	1	0.147 (0.433)	1	0.279 (0.855)	Time
(0.3, 0.7)	1	0.065 (0.129)	1	0.144 (0.130)	1	0.146 (0.433)	1	0.264 (0.857)	Time
(0.4, 0.6)	1	0.065 (0.129)	1	0.142 (0.126)	1	0.144 (0.434)	1	0.253 (0.860)	Time
(0.5, 0.5)	1	0.066 (0.128)	1	0.140 (0.123)	1	0.142 (0.435)	1	0.249 (0.862)	Time
(0.6, 0.4)	1	0.065 (0.126)	1	0.139 (0.119)	1	0.141 (0.435)	1	0.248 (0.862)	Time
(0.7, 0.3)	1	0.065 (0.125)	1	0.138 (0.119)	1	0.141 (0.435)	1	0.250 (0.862)	Time
(0.8, 0.2)	1	0.065 (0.124)	1	0.137 (0.120)	1	0.138 (0.435)	1	0.253 (0.861)	Time
(0.9, 0.1)	1	0.064 (0.125)	2	0.137 (0.124)	1	0.139 (0.434)	3	0.253 (0.859)	Time

Table 137. SOGA on NRP-M4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.021 (0.021)	2	0.155 (0.004)	3	0.967 (0.703)	3	0.967 (0.703)	Eval.
(0.2, 0.8)	1	0.089 (0.116)	1	0.107 (0.044)	1	0.448 (0.635)	1	0.448 (0.635)	Eval.
(0.3, 0.7)	1	0.110 (0.196)	1	0.102 (0.093)	1	0.574 (0.607)	1	0.574 (0.651)	Eval.
(0.4, 0.6)	1	0.054 (0.110)	1	0.049 (0.045)	1	0.350 (0.399)	2	0.510 (0.755)	Eval.
(0.5, 0.5)	2	0.064 (0.093)	1	0.033 (0.036)	3	0.404 (0.429)	4	0.495 (0.800)	Eval.
(0.6, 0.4)	2	0.059 (0.071)	1	0.031 (0.035)	3	0.442 (0.337)	4	0.461 (0.764)	Eval.
(0.7, 0.3)	1	0.042 (0.053)	2	0.025 (0.040)	3	0.377 (0.369)	4	0.469 (0.807)	Eval.
(0.8, 0.2)	1	0.023 (0.039)	1	0.013 (0.016)	2	0.295 (0.359)	3	0.466 (0.769)	Eval.
(0.9, 0.1)	1	0.033 (0.054)	1	0.023 (0.032)	2	0.277 (0.503)	3	0.635 (0.723)	Eval.
(0.1, 0.9)	1	0.031 (0.058)	2	0.027 (0.029)	3	0.199 (0.424)	3	0.569 (0.802)	Time
(0.2, 0.8)	1	0.026 (0.068)	1	0.031 (0.035)	2	0.240 (0.517)	2	0.575 (0.833)	Time
(0.3, 0.7)	2	0.034 (0.069)	1	0.030 (0.036)	3	0.249 (0.542)	3	0.601 (0.819)	Time
(0.4, 0.6)	2	0.044 (0.075)	1	0.030 (0.036)	3	0.249 (0.469)	3	0.484 (0.751)	Time
(0.5, 0.5)	2	0.049 (0.076)	1	0.030 (0.036)	3	0.366 (0.469)	3	0.484 (0.751)	Time
(0.6, 0.4)	2	0.049 (0.070)	1	0.030 (0.037)	3	0.364 (0.470)	3	0.600 (0.753)	Time
(0.7, 0.3)	1	0.048 (0.068)	1	0.033 (0.051)	2	0.364 (0.588)	2	0.600 (0.753)	Time
(0.8, 0.2)	1	0.046 (0.067)	1	0.033 (0.042)	2	0.364 (0.471)	3	0.717 (0.753)	Time
(0.9, 0.1)	1	0.046 (0.075)	1	0.031 (0.044)	2	0.383 (0.571)	3	0.753 (0.617)	Time

Table 138. HC on NRP-M4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.046 (0.076)	2	0.032 (0.039)	3	0.262 (0.569)	3	0.754 (0.738)	Eval.
(0.2, 0.8)	2	0.046 (0.076)	1	0.032 (0.038)	3	0.262 (0.569)	3	0.631 (0.738)	Eval.
(0.3, 0.7)	2	0.049 (0.079)	1	0.032 (0.038)	3	0.262 (0.570)	3	0.631 (0.738)	Eval.
(0.4, 0.6)	2	0.047 (0.080)	1	0.029 (0.038)	3	0.383 (0.571)	3	0.630 (0.740)	Eval.
(0.5, 0.5)	2	0.051 (0.078)	1	0.029 (0.038)	3	0.383 (0.494)	3	0.630 (0.741)	Eval.
(0.6, 0.4)	2	0.052 (0.078)	1	0.031 (0.038)	3	0.383 (0.494)	4	0.630 (0.741)	Eval.
(0.7, 0.3)	1	0.049 (0.072)	2	0.033 (0.042)	3	0.364 (0.470)	4	0.717 (0.753)	Eval.
(0.8, 0.2)	1	0.046 (0.073)	2	0.033 (0.042)	3	0.364 (0.544)	4	0.717 (0.636)	Eval.
(0.9, 0.1)	1	0.044 (0.072)	1	0.029 (0.042)	1	0.364 (0.544)	2	0.717 (0.636)	Eval.
(0.1, 0.9)	1	0.046 (0.078)	2	0.029 (0.044)	3	0.383 (0.571)	3	0.753 (0.741)	Time
(0.2, 0.8)	2	0.046 (0.074)	1	0.029 (0.038)	3	0.383 (0.571)	3	0.753 (0.741)	Time
(0.3, 0.7)	1	0.046 (0.077)	1	0.029 (0.038)	1	0.383 (0.571)	1	0.753 (0.741)	Time
(0.4, 0.6)	2	0.048 (0.078)	1	0.029 (0.038)	3	0.383 (0.571)	3	0.630 (0.741)	Time
(0.5, 0.5)	2	0.051 (0.079)	1	0.031 (0.038)	3	0.383 (0.571)	4	0.631 (0.741)	Time
(0.6, 0.4)	2	0.050 (0.074)	1	0.030 (0.037)	3	0.364 (0.544)	4	0.601 (0.753)	Time
(0.7, 0.3)	1	0.049 (0.074)	2	0.033 (0.042)	3	0.364 (0.470)	4	0.717 (0.636)	Time
(0.8, 0.2)	1	0.048 (0.074)	2	0.033 (0.042)	3	0.364 (0.544)	4	0.717 (0.636)	Time
(0.9, 0.1)	1	0.046 (0.071)	1	0.030 (0.042)	1	0.364 (0.544)	2	0.717 (0.636)	Time

Table 139. RS on NRP-M4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	1	0.048 (0.074)	1	0.033 (0.042)	1	0.364 (0.544)	1	0.717 (0.741)	Eval.
(0.2, 0.8)	1	0.052 (0.082)	1	0.035 (0.054)	1	0.383 (0.571)	1	0.753 (0.741)	Eval.
(0.3, 0.7)	2	0.053 (0.084)	1	0.034 (0.054)	1	0.272 (0.572)	1	0.631 (0.741)	Eval.
(0.4, 0.6)	2	0.056 (0.088)	1	0.034 (0.054)	1	0.259 (0.572)	1	0.629 (0.741)	Eval.
(0.5, 0.5)	2	0.057 (0.088)	1	0.034 (0.054)	1	0.259 (0.572)	1	0.629 (0.761)	Eval.
(0.6, 0.4)	2	0.059 (0.092)	1	0.034 (0.053)	2	0.259 (0.531)	1	0.629 (0.783)	Eval.
(0.7, 0.3)	2	0.062 (0.090)	1	0.034 (0.053)	3	0.258 (0.535)	1	0.629 (0.807)	Eval.
(0.8, 0.2)	2	0.057 (0.087)	1	0.032 (0.052)	2	0.257 (0.449)	1	0.505 (0.815)	Eval.
(0.9, 0.1)	1	0.057 (0.088)	1	0.034 (0.054)	1	0.249 (0.448)	1	0.506 (0.821)	Eval.
(0.1, 0.9)	1	0.059 (0.092)	1	0.034 (0.053)	1	0.233 (0.448)	1	0.506 (0.822)	Time
(0.2, 0.8)	1	0.062 (0.097)	1	0.034 (0.057)	1	0.226 (0.449)	1	0.505 (0.821)	Time
(0.3, 0.7)	2	0.063 (0.103)	1	0.035 (0.056)	1	0.219 (0.449)	1	0.484 (0.823)	Time
(0.4, 0.6)	2	0.063 (0.109)	1	0.035 (0.056)	1	0.209 (0.445)	1	0.468 (0.836)	Time
(0.5, 0.5)	2	0.066 (0.112)	1	0.035 (0.055)	1	0.201 (0.422)	1	0.467 (0.848)	Time
(0.6, 0.4)	3	0.065 (0.110)	1	0.033 (0.053)	2	0.193 (0.425)	1	0.379 (0.860)	Time
(0.7, 0.3)	2	0.066 (0.109)	1	0.031 (0.052)	3	0.185 (0.423)	1	0.378 (0.871)	Time
(0.8, 0.2)	2	0.064 (0.106)	1	0.031 (0.052)	2	0.181 (0.443)	1	0.378 (0.871)	Time
(0.9, 0.1)	1	0.075 (0.122)	1	0.040 (0.063)	1	0.210 (0.513)	1	0.434 (0.849)	Time

Table 140. SA on NRP-M4 for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.9)	2	0.076 (0.126)	2	0.039 (0.062)	2	0.210 (0.514)	1	0.434 (0.849)	Eval.
(0.2, 0.8)	2	0.076 (0.130)	2	0.037 (0.060)	2	0.213 (0.513)	1	0.292 (0.851)	Eval.
(0.3, 0.7)	2	0.077 (0.134)	2	0.036 (0.077)	2	0.217 (0.506)	1	0.290 (0.858)	Eval.
(0.4, 0.6)	3	0.078 (0.139)	2	0.035 (0.085)	2	0.211 (0.498)	1	0.289 (0.866)	Eval.
(0.5, 0.5)	4	0.076 (0.144)	2	0.033 (0.102)	3	0.205 (0.467)	1	0.288 (0.876)	Eval.
(0.6, 0.4)	3	0.077 (0.144)	2	0.031 (0.098)	3	0.203 (0.462)	1	0.286 (0.884)	Eval.
(0.7, 0.3)	2	0.076 (0.139)	1	0.029 (0.092)	2	0.195 (0.442)	1	0.271 (0.893)	Eval.
(0.8, 0.2)	2	0.076 (0.137)	1	0.030 (0.089)	2	0.193 (0.458)	1	0.257 (0.900)	Eval.
(0.9, 0.1)	1	0.083 (0.149)	1	0.037 (0.098)	1	0.211 (0.510)	1	0.273 (0.899)	Eval.
(0.1, 0.9)	2	0.086 (0.158)	2	0.036 (0.110)	2	0.215 (0.521)	1	0.270 (0.899)	Time
(0.2, 0.8)	2	0.087 (0.164)	2	0.035 (0.121)	2	0.220 (0.410)	1	0.265 (0.898)	Time
(0.3, 0.7)	3	0.089 (0.170)	2	0.038 (0.131)	2	0.220 (0.400)	1	0.252 (0.899)	Time
(0.4, 0.6)	3	0.092 (0.180)	2	0.041 (0.145)	2	0.222 (0.407)	1	0.251 (0.898)	Time
(0.5, 0.5)	4	0.090 (0.179)	2	0.039 (0.142)	3	0.220 (0.402)	1	0.244 (0.904)	Time
(0.6, 0.4)	3	0.092 (0.177)	2	0.038 (0.138)	3	0.216 (0.398)	1	0.236 (0.912)	Time
(0.7, 0.3)	2	0.091 (0.174)	1	0.035 (0.135)	3	0.211 (0.401)	1	0.232 (0.918)	Time
(0.8, 0.2)	2	0.092 (0.170)	1	0.040 (0.137)	2	0.209 (0.414)	1	0.232 (0.919)	Time
(0.9, 0.1)	1	0.094 (0.173)	1	0.043 (0.137)	1	0.208 (0.433)	1	0.227 (0.920)	Time

Table 141. SOGA on NRP-E-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.000 (0.000)	1	0.000 (0.000)	2	0.000 (1.000)	2	0.000 (0.000)	Eval.
(0.8, 0.1, 0.1)	3	0.173 (0.238)	1	0.088 (0.099)	2	0.190 (0.102)	4	0.658 (0.901)	Eval.
(0.1, 0.1, 0.8)	1	0.066 (0.195)	1	0.007 (0.096)	2	0.195 (0.182)	3	0.287 (0.895)	Eval.
(0.33, 0.33, 0.33)	2	0.190 (0.498)	1	0.088 (0.156)	3	0.201 (0.724)	3	0.926 (0.813)	Eval.
(0.1, 0.8, 0.1)	1	0.066 (0.255)	2	0.076 (0.099)	2	0.190 (0.698)	2	0.282 (0.901)	Time
(0.8, 0.1, 0.1)	2	0.183 (0.218)	1	0.099 (0.132)	1	0.187 (0.698)	3	0.926 (0.901)	Time
(0.1, 0.1, 0.8)	1	0.075 (0.218)	1	0.075 (0.132)	2	0.187 (0.118)	2	0.797 (0.901)	Time
(0.33, 0.33, 0.33)	2	0.167 (0.361)	1	0.074 (0.132)	3	0.167 (0.783)	3	0.924 (0.836)	Time

Table 142. HC on NRP-E-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.076 (0.240)	1	0.076 (0.132)	3	0.190 (0.762)	2	0.797 (0.901)	Eval.
(0.8, 0.1, 0.1)	3	0.183 (0.274)	1	0.090 (0.132)	2	0.190 (0.762)	4	0.926 (0.901)	Eval.
(0.1, 0.1, 0.8)	1	0.099 (0.260)	1	0.088 (0.132)	2	0.187 (0.633)	3	0.926 (0.893)	Eval.
(0.33, 0.33, 0.33)	2	0.203 (0.436)	1	0.090 (0.174)	3	0.190 (0.737)	4	0.926 (0.813)	Eval.
(0.1, 0.8, 0.1)	1	0.099 (0.307)	1	0.090 (0.132)	2	0.190 (0.762)	1	0.797 (0.897)	Time
(0.8, 0.1, 0.1)	3	0.186 (0.295)	1	0.099 (0.132)	2	0.189 (0.738)	4	0.926 (0.893)	Time
(0.1, 0.1, 0.8)	1	0.108 (0.296)	1	0.065 (0.108)	2	0.167 (0.758)	3	0.885 (0.884)	Time
(0.33, 0.33, 0.33)	2	0.171 (0.401)	1	0.074 (0.151)	3	0.171 (0.758)	4	0.924 (0.836)	Time

Table 143. RS on NRP-E-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.195 (0.539)	1	0.074 (0.151)	1	0.174 (0.744)	1	0.791 (0.836)	Eval.
(0.8, 0.1, 0.1)	2	0.189 (0.505)	1	0.074 (0.151)	2	0.175 (0.650)	3	0.679 (0.836)	Eval.
(0.1, 0.1, 0.8)	1	0.198 (0.540)	1	0.075 (0.151)	1	0.195 (0.650)	2	0.791 (0.836)	Eval.
(0.33, 0.33, 0.33)	2	0.206 (0.570)	1	0.090 (0.253)	1	0.257 (0.654)	2	0.790 (0.842)	Eval.
(0.1, 0.8, 0.1)	1	0.219 (0.527)	1	0.102 (0.341)	1	0.257 (0.650)	1	0.724 (0.842)	Time
(0.8, 0.1, 0.1)	1	0.200 (0.514)	1	0.096 (0.336)	1	0.252 (0.552)	2	0.643 (0.834)	Time
(0.1, 0.1, 0.8)	1	0.184 (0.523)	1	0.062 (0.312)	1	0.224 (0.529)	2	0.702 (0.849)	Time
(0.33, 0.33, 0.33)	3	0.184 (0.532)	2	0.062 (0.311)	1	0.251 (0.505)	4	0.696 (0.850)	Time

Table 144. SA on NRP-E-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.208 (0.550)	2	0.069 (0.375)	2	0.266 (0.506)	1	0.648 (0.850)	Eval.
(0.8, 0.1, 0.1)	2	0.191 (0.543)	1	0.069 (0.358)	2	0.251 (0.495)	3	0.605 (0.850)	Eval.
(0.1, 0.1, 0.8)	1	0.208 (0.550)	1	0.077 (0.404)	1	0.266 (0.514)	1	0.648 (0.837)	Eval.
(0.33, 0.33, 0.33)	2	0.229 (0.563)	1	0.078 (0.425)	1	0.331 (0.523)	2	0.652 (0.831)	Eval.
(0.1, 0.8, 0.1)	2	0.255 (0.548)	2	0.084 (0.440)	2	0.345 (0.514)	1	0.619 (0.845)	Time
(0.8, 0.1, 0.1)	2	0.224 (0.510)	1	0.082 (0.433)	2	0.321 (0.505)	3	0.581 (0.836)	Time
(0.1, 0.1, 0.8)	1	0.245 (0.478)	1	0.079 (0.441)	1	0.339 (0.504)	1	0.620 (0.832)	Time
(0.33, 0.33, 0.33)	3	0.269 (0.481)	2	0.084 (0.457)	1	0.350 (0.500)	3	0.628 (0.820)	Time

Table 145. SOGA on NRP-G-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.039 (0.131)	1	0.131 (0.148)	1	0.284 (0.796)	1	0.590 (0.852)	Eval.
(0.8, 0.1, 0.1)	3	0.172 (0.251)	1	0.035 (0.041)	2	0.104 (0.088)	4	0.758 (0.964)	Eval.
(0.1, 0.1, 0.8)	2	0.065 (0.256)	1	0.011 (0.049)	1	0.044 (0.104)	2	0.101 (0.959)	Eval.
(0.33, 0.33, 0.33)	2	0.227 (0.357)	1	0.046 (0.081)	2	0.116 (0.123)	2	0.445 (0.918)	Eval.
(0.1, 0.8, 0.1)	1	0.102 (0.460)	1	0.016 (0.083)	1	0.109 (0.166)	1	0.160 (0.947)	Time
(0.8, 0.1, 0.1)	3	0.179 (0.290)	1	0.031 (0.045)	2	0.089 (0.101)	4	0.358 (0.968)	Time
(0.1, 0.1, 0.8)	1	0.147 (0.285)	1	0.022 (0.053)	1	0.070 (0.104)	1	0.102 (0.966)	Time
(0.33, 0.33, 0.33)	2	0.227 (0.343)	1	0.046 (0.081)	3	0.116 (0.123)	2	0.445 (0.949)	Time

Table 146. HC on NRP-G-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.232 (0.448)	1	0.031 (0.081)	1	0.107 (0.165)	1	0.160 (0.949)	Eval.
(0.8, 0.1, 0.1)	3	0.154 (0.271)	1	0.031 (0.045)	2	0.097 (0.101)	4	0.358 (0.968)	Eval.
(0.1, 0.1, 0.8)	3	0.144 (0.266)	1	0.016 (0.045)	1	0.062 (0.104)	2	0.161 (0.968)	Eval.
(0.33, 0.33, 0.33)	2	0.311 (0.384)	1	0.048 (0.117)	1	0.145 (0.157)	2	0.524 (0.948)	Eval.
(0.1, 0.8, 0.1)	1	0.230 (0.464)	1	0.036 (0.084)	1	0.100 (0.166)	1	0.258 (0.959)	Time
(0.8, 0.1, 0.1)	3	0.203 (0.277)	1	0.023 (0.045)	2	0.098 (0.101)	4	0.354 (0.968)	Time
(0.1, 0.1, 0.8)	2	0.172 (0.268)	1	0.026 (0.048)	1	0.082 (0.103)	2	0.258 (0.964)	Time
(0.33, 0.33, 0.33)	3	0.319 (0.382)	1	0.034 (0.127)	2	0.145 (0.161)	3	0.524 (0.948)	Time

Table 147. RS on NRP-G-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.370 (0.468)	1	0.049 (0.169)	1	0.170 (0.262)	1	0.575 (0.944)	Eval.
(0.8, 0.1, 0.1)	3	0.360 (0.460)	1	0.063 (0.169)	2	0.170 (0.233)	2	0.569 (0.937)	Eval.
(0.1, 0.1, 0.8)	1	0.362 (0.448)	1	0.060 (0.172)	1	0.158 (0.241)	2	0.536 (0.924)	Eval.
(0.33, 0.33, 0.33)	3	0.394 (0.499)	1	0.067 (0.209)	2	0.161 (0.530)	2	0.547 (0.908)	Eval.
(0.1, 0.8, 0.1)	1	0.423 (0.535)	1	0.070 (0.224)	1	0.168 (0.567)	1	0.574 (0.904)	Time
(0.8, 0.1, 0.1)	3	0.412 (0.518)	1	0.069 (0.224)	2	0.167 (0.548)	3	0.571 (0.905)	Time
(0.1, 0.1, 0.8)	1	0.420 (0.520)	1	0.070 (0.242)	1	0.164 (0.521)	2	0.572 (0.906)	Time
(0.33, 0.33, 0.33)	3	0.447 (0.550)	1	0.083 (0.357)	1	0.158 (0.525)	2	0.569 (0.867)	Time

Table 148. SA on NRP-G-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.457 (0.561)	2	0.091 (0.470)	2	0.163 (0.551)	1	0.568 (0.870)	Eval.
(0.8, 0.1, 0.1)	4	0.449 (0.481)	1	0.098 (0.458)	2	0.170 (0.525)	3	0.567 (0.867)	Eval.
(0.1, 0.1, 0.8)	1	0.455 (0.442)	1	0.107 (0.498)	1	0.177 (0.535)	2	0.566 (0.869)	Eval.
(0.33, 0.33, 0.33)	2	0.449 (0.449)	1	0.105 (0.521)	1	0.180 (0.560)	1	0.561 (0.876)	Eval.
(0.1, 0.8, 0.1)	2	0.470 (0.461)	2	0.116 (0.554)	2	0.195 (0.579)	1	0.563 (0.874)	Time
(0.8, 0.1, 0.1)	3	0.451 (0.436)	1	0.101 (0.541)	2	0.184 (0.542)	3	0.559 (0.880)	Time
(0.1, 0.1, 0.8)	1	0.466 (0.433)	1	0.110 (0.555)	1	0.194 (0.521)	2	0.560 (0.863)	Time
(0.33, 0.33, 0.33)	3	0.482 (0.444)	1	0.127 (0.557)	2	0.215 (0.519)	2	0.566 (0.842)	Time

Table 149. SOGA on NRP-M-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.399 (0.624)	1	0.399 (0.162)	2	0.906 (0.094)	2	0.906 (0.000)	Eval.
(0.8, 0.1, 0.1)	3	0.312 (0.365)	1	0.003 (0.043)	2	0.185 (0.034)	4	1.000 (0.845)	Eval.
(0.1, 0.1, 0.8)	1	0.101 (0.194)	1	0.021 (0.053)	1	0.097 (0.021)	2	0.529 (0.919)	Eval.
(0.33, 0.33, 0.33)	2	0.223 (0.272)	1	0.034 (0.126)	3	0.120 (0.159)	3	0.642 (0.834)	Eval.
(0.1, 0.8, 0.1)	1	0.131 (0.250)	1	0.078 (0.136)	1	0.125 (0.099)	1	0.683 (0.896)	Time
(0.8, 0.1, 0.1)	3	0.237 (0.250)	2	0.128 (0.151)	1	0.127 (0.059)	4	0.683 (0.896)	Time
(0.1, 0.1, 0.8)	1	0.131 (0.235)	1	0.120 (0.143)	1	0.120 (0.069)	2	0.642 (0.884)	Time
(0.33, 0.33, 0.33)	2	0.219 (0.268)	1	0.098 (0.133)	3	0.120 (0.159)	3	0.642 (0.834)	Time

Table 150. HC on NRP-M-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.126 (0.238)	1	0.088 (0.149)	2	0.112 (0.184)	2	0.677 (0.911)	Eval.
(0.8, 0.1, 0.1)	3	0.224 (0.240)	1	0.072 (0.135)	2	0.121 (0.100)	4	0.680 (0.883)	Eval.
(0.1, 0.1, 0.8)	1	0.187 (0.210)	1	0.066 (0.133)	1	0.097 (0.149)	2	0.585 (0.906)	Eval.
(0.33, 0.33, 0.33)	3	0.218 (0.400)	1	0.081 (0.144)	2	0.104 (0.187)	4	0.635 (0.849)	Eval.
(0.1, 0.8, 0.1)	1	0.195 (0.277)	1	0.074 (0.137)	1	0.097 (0.189)	1	0.632 (0.907)	Time
(0.8, 0.1, 0.1)	3	0.208 (0.220)	2	0.094 (0.137)	1	0.096 (0.185)	4	0.632 (0.907)	Time
(0.1, 0.1, 0.8)	2	0.210 (0.242)	1	0.093 (0.136)	1	0.095 (0.185)	3	0.631 (0.909)	Time
(0.33, 0.33, 0.33)	3	0.211 (0.429)	1	0.091 (0.135)	2	0.092 (0.192)	4	0.630 (0.887)	Time

Table 151. RS on NRP-M-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	1	0.208 (0.527)	1	0.093 (0.151)	1	0.092 (0.508)	1	0.639 (0.560)	Eval.
(0.8, 0.1, 0.1)	2	0.202 (0.500)	1	0.095 (0.136)	2	0.117 (0.381)	2	0.626 (0.850)	Eval.
(0.1, 0.1, 0.8)	1	0.198 (0.540)	1	0.091 (0.159)	1	0.130 (0.589)	2	0.634 (0.834)	Eval.
(0.33, 0.33, 0.33)	2	0.189 (0.609)	1	0.084 (0.174)	1	0.135 (0.693)	2	0.692 (0.789)	Eval.
(0.1, 0.8, 0.1)	1	0.189 (0.587)	1	0.084 (0.226)	1	0.141 (0.664)	1	0.631 (0.624)	Time
(0.8, 0.1, 0.1)	1	0.175 (0.563)	1	0.091 (0.216)	1	0.135 (0.626)	1	0.613 (0.841)	Time
(0.1, 0.1, 0.8)	1	0.153 (0.530)	1	0.069 (0.253)	1	0.115 (0.621)	1	0.533 (0.851)	Time
(0.33, 0.33, 0.33)	2	0.173 (0.638)	1	0.071 (0.467)	1	0.142 (0.742)	3	0.671 (0.795)	Time

Table 152. SA on NRP-M-3o for **RQ1** (Med denotes median; the best rank has been highlighted).

Weight Vector	Dynamic		Fixed		Ratio		None		Budget
	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	Rank	Med (IQR)	
(0.1, 0.8, 0.1)	2	0.185 (0.618)	2	0.069 (0.551)	2	0.165 (0.731)	1	0.629 (0.800)	Eval.
(0.8, 0.1, 0.1)	2	0.174 (0.592)	1	0.069 (0.529)	2	0.152 (0.720)	2	0.603 (0.861)	Eval.
(0.1, 0.1, 0.8)	1	0.153 (0.495)	1	0.056 (0.472)	1	0.135 (0.624)	2	0.508 (0.873)	Eval.
(0.33, 0.33, 0.33)	2	0.197 (0.635)	1	0.069 (0.631)	1	0.183 (0.800)	1	0.643 (0.825)	Eval.
(0.1, 0.8, 0.1)	2	0.372 (0.638)	2	0.067 (0.634)	2	0.191 (0.814)	1	0.615 (0.833)	Time
(0.8, 0.1, 0.1)	1	0.186 (0.628)	1	0.062 (0.616)	1	0.170 (0.799)	1	0.594 (0.871)	Time
(0.1, 0.1, 0.8)	1	0.293 (0.545)	1	0.056 (0.533)	1	0.146 (0.699)	2	0.491 (0.886)	Time
(0.33, 0.33, 0.33)	1	0.361 (0.644)	1	0.069 (0.643)	1	0.177 (0.787)	1	0.588 (0.858)	Time

Table 153. wc-c1-3D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.065 (1.000)	0.000 (0.065)	0.065 (1.000)	<b>0.701 (&lt;0.001)</b>	0.539 (0.342)	Eval.
(0.2, 0.8)	0.314 (0.963)	0.239 (0.314)	0.239 (0.963)	<b>0.747 (&lt;0.001)</b>	<b>0.586 (0.036)</b>	Eval.
(0.3, 0.7)	0.517 (0.807)	0.264 (0.421)	0.421 (0.729)	<b>0.735 (&lt;0.001)</b>	<b>0.582 (0.046)</b>	Eval.
(0.4, 0.6)	0.297 (0.937)	0.202 (0.404)	0.297 (0.762)	<b>0.782 (&lt;0.001)</b>	<b>0.635 (0.001)</b>	Eval.
(0.5, 0.5)	0.696 (0.846)	0.390 (0.795)	0.696 (0.917)	0.521 (0.612)	0.373 (0.002)	Eval.
(0.6, 0.4)	0.486 (0.509)	0.486 (0.770)	0.486 (0.802)	0.518 (0.667)	0.354 (<0.001)	Eval.
(0.7, 0.3)	0.359 (0.719)	0.169 (0.584)	0.359 (1.000)	0.538 (0.352)	0.373 (0.002)	Eval.
(0.8, 0.2)	0.500 (0.672)	0.250 (0.500)	0.500 (0.750)	0.546 (0.258)	0.369 (0.001)	Eval.
(0.9, 0.1)	0.368 (0.750)	0.250 (0.500)	0.500 (0.922)	0.522 (0.589)	0.351 (<0.001)	Eval.
(0.1, 0.9)	0.501 (0.649)	0.399 (0.615)	0.615 (0.818)	<b>0.701 (&lt;0.001)</b>	0.539 (0.342)	Time
(0.2, 0.8)	0.386 (0.816)	0.272 (0.544)	0.529 (1.000)	<b>0.747 (&lt;0.001)</b>	<b>0.586 (0.036)</b>	Time
(0.3, 0.7)	0.389 (0.793)	0.264 (0.529)	0.389 (1.000)	<b>0.735 (&lt;0.001)</b>	<b>0.582 (0.046)</b>	Time
(0.4, 0.6)	0.368 (0.750)	0.250 (0.500)	0.500 (0.922)	<b>0.782 (&lt;0.001)</b>	<b>0.635 (0.001)</b>	Time
(0.5, 0.5)	0.529 (0.710)	0.264 (0.694)	0.529 (0.917)	0.521 (0.612)	0.373 (0.002)	Time
(0.6, 0.4)	0.529 (0.710)	0.264 (0.529)	0.529 (0.917)	0.518 (0.667)	0.354 (<0.001)	Time
(0.7, 0.3)	0.500 (0.672)	0.250 (0.500)	0.500 (0.750)	0.538 (0.352)	0.373 (0.002)	Time
(0.8, 0.2)	0.500 (0.750)	0.250 (0.500)	0.500 (0.922)	0.546 (0.258)	0.369 (0.001)	Time
(0.9, 0.1)	0.368 (0.750)	0.250 (0.500)	0.500 (0.922)	0.522 (0.589)	0.351 (<0.001)	Time

Table 154. wc-c3-3D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.262 (0.350)	0.336 (0.517)	0.555 (0.664)	0.446 (0.189)	0.224 (<0.001)	Eval.
(0.2, 0.8)	0.254 (0.332)	0.306 (0.478)	0.518 (0.694)	0.453 (0.250)	0.233 (<0.001)	Eval.
(0.3, 0.7)	0.242 (0.460)	0.261 (0.481)	0.507 (0.758)	0.509 (0.819)	0.297 (<0.001)	Eval.
(0.4, 0.6)	0.224 (0.422)	0.224 (0.435)	0.479 (0.795)	<b>0.766 (&lt;0.001)</b>	<b>0.621 (0.003)</b>	Eval.
(0.5, 0.5)	0.225 (0.698)	0.190 (0.397)	0.468 (0.832)	<b>0.744 (&lt;0.001)</b>	<b>0.662 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.275 (0.949)	0.225 (0.415)	0.480 (0.734)	<b>0.717 (&lt;0.001)</b>	<b>0.676 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.334 (0.933)	0.261 (0.456)	0.541 (0.821)	<b>0.680 (&lt;0.001)</b>	<b>0.593 (0.023)</b>	Eval.
(0.8, 0.2)	0.358 (0.939)	0.269 (0.444)	0.532 (0.790)	<b>0.702 (&lt;0.001)</b>	<b>0.598 (0.016)</b>	Eval.
(0.9, 0.1)	0.420 (1.000)	0.317 (0.458)	0.484 (0.746)	<b>0.635 (0.001)</b>	0.553 (0.196)	Eval.
(0.1, 0.9)	0.344 (0.938)	0.322 (0.465)	0.520 (0.742)	0.446 (0.189)	0.224 (<0.001)	Time
(0.2, 0.8)	0.336 (0.880)	0.314 (0.455)	0.521 (0.748)	0.453 (0.250)	0.233 (<0.001)	Time
(0.3, 0.7)	0.332 (0.848)	0.310 (0.448)	0.527 (0.752)	0.509 (0.819)	0.297 (<0.001)	Time
(0.4, 0.6)	0.328 (0.858)	0.304 (0.449)	0.521 (0.755)	<b>0.766 (&lt;0.001)</b>	<b>0.621 (0.003)</b>	Time
(0.5, 0.5)	0.347 (0.853)	0.307 (0.462)	0.527 (0.764)	<b>0.744 (&lt;0.001)</b>	<b>0.662 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.343 (0.939)	0.304 (0.444)	0.521 (0.789)	<b>0.717 (&lt;0.001)</b>	<b>0.676 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.358 (1.000)	0.304 (0.444)	0.509 (0.789)	<b>0.680 (&lt;0.001)</b>	<b>0.593 (0.023)</b>	Time
(0.8, 0.2)	0.417 (1.000)	0.311 (0.455)	0.508 (0.788)	<b>0.702 (&lt;0.001)</b>	<b>0.598 (0.016)</b>	Time
(0.9, 0.1)	0.420 (1.000)	0.317 (0.458)	0.484 (0.746)	<b>0.635 (0.001)</b>	0.553 (0.196)	Time



Table 155. wc-c4-3D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.365 (1.000)	0.905 (0.581)	0.365 (0.946)	0.471 (0.479)	0.529 (0.480)	Eval.
(0.2, 0.8)	0.928 (1.000)	0.928 (0.904)	0.928 (0.947)	<b>0.611 (0.007)</b>	<b>0.647 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.580 (0.903)	0.565 (1.000)	0.546 (0.907)	0.350 (<0.001)	0.359 (0.001)	Eval.
(0.4, 0.6)	0.532 (1.000)	0.532 (1.000)	0.532 (1.000)	0.325 (<0.001)	0.343 (<0.001)	Eval.
(0.5, 0.5)	0.363 (0.864)	0.501 (0.988)	0.501 (1.000)	0.307 (<0.001)	0.330 (<0.001)	Eval.
(0.6, 0.4)	0.512 (0.887)	0.512 (0.970)	0.512 (1.000)	0.303 (<0.001)	0.329 (<0.001)	Eval.
(0.7, 0.3)	0.495 (0.777)	0.515 (0.961)	0.524 (1.000)	0.419 (0.048)	0.429 (0.083)	Eval.
(0.8, 0.2)	0.400 (0.800)	0.447 (0.962)	0.524 (1.000)	<b>0.748 (&lt;0.001)</b>	<b>0.634 (0.001)</b>	Eval.
(0.9, 0.1)	0.333 (0.702)	0.440 (0.779)	0.500 (1.000)	0.363 (0.001)	0.022 (<0.001)	Eval.
(0.1, 0.9)	0.401 (0.735)	0.456 (0.861)	0.547 (1.000)	0.471 (0.479)	0.529 (0.480)	Time
(0.2, 0.8)	0.420 (0.827)	0.437 (0.871)	0.444 (1.000)	<b>0.611 (0.007)</b>	<b>0.647 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.344 (0.774)	0.344 (0.853)	0.344 (1.000)	0.350 (<0.001)	0.359 (0.001)	Time
(0.4, 0.6)	0.367 (0.724)	0.467 (0.910)	0.382 (1.000)	0.325 (<0.001)	0.343 (<0.001)	Time
(0.5, 0.5)	0.450 (0.707)	0.469 (0.887)	0.477 (1.000)	0.307 (<0.001)	0.330 (<0.001)	Time
(0.6, 0.4)	0.465 (0.678)	0.469 (0.880)	0.537 (1.000)	0.303 (<0.001)	0.329 (<0.001)	Time
(0.7, 0.3)	0.326 (0.800)	0.400 (0.853)	0.524 (1.000)	0.419 (0.048)	0.429 (0.083)	Time
(0.8, 0.2)	0.359 (0.718)	0.470 (0.891)	0.474 (1.000)	<b>0.748 (&lt;0.001)</b>	<b>0.634 (0.001)</b>	Time
(0.9, 0.1)	0.333 (0.702)	0.440 (0.779)	0.500 (1.000)	0.363 (0.001)	0.022 (<0.001)	Time

Table 156. wc-c5-5D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	1.000 (0.000)	1.000 (0.000)	0.000 (0.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	Time

Table 157. rs-c3-6D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.652 (0.002)	0.031 (0.196)	0.616 (0.589)	<b>1.000 (&lt;0.001)</b>	0.561 (0.135)	Eval.
(0.2, 0.8)	1.000 (0.996)	0.982 (0.991)	0.991 (0.995)	<b>1.000 (&lt;0.001)</b>	<b>0.614 (0.006)</b>	Eval.
(0.3, 0.7)	0.501 (0.999)	0.496 (0.726)	0.500 (0.736)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.504 (0.991)	0.218 (0.379)	0.218 (0.374)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.502 (0.995)	0.240 (0.417)	0.254 (0.440)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.824 (0.995)	0.374 (0.461)	0.374 (0.559)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.502 (0.997)	0.398 (0.517)	0.416 (0.557)	0.447 (0.199)	0.269 (<0.001)	Eval.
(0.8, 0.2)	0.500 (1.000)	0.372 (0.459)	0.372 (0.557)	0.290 (<0.001)	0.151 (<0.001)	Eval.
(0.9, 0.1)	0.502 (0.995)	0.240 (0.442)	0.254 (0.545)	0.270 (<0.001)	0.127 (<0.001)	Eval.
(0.1, 0.9)	0.601 (1.000)	0.453 (0.571)	0.464 (0.570)	<b>1.000 (&lt;0.001)</b>	0.561 (0.135)	Time
(0.2, 0.8)	0.294 (1.000)	0.368 (0.599)	0.440 (0.600)	<b>1.000 (&lt;0.001)</b>	<b>0.614 (0.006)</b>	Time
(0.3, 0.7)	0.506 (0.989)	0.263 (0.508)	0.270 (0.534)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.502 (0.995)	0.229 (0.417)	0.242 (0.441)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.502 (0.995)	0.240 (0.442)	0.254 (0.532)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.502 (0.995)	0.240 (0.462)	0.272 (0.550)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.502 (0.996)	0.374 (0.462)	0.374 (0.557)	0.447 (0.199)	0.269 (<0.001)	Time
(0.8, 0.2)	0.502 (0.997)	0.239 (0.461)	0.271 (0.548)	0.290 (<0.001)	0.151 (<0.001)	Time
(0.9, 0.1)	0.502 (0.995)	0.240 (0.442)	0.254 (0.545)	0.270 (<0.001)	0.127 (<0.001)	Time

Table 158. wc-c1-6D for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.013 (0.987)	0.000 (0.000)	0.035 (0.020)	<b>0.999 (&lt;0.001)</b>	0.355 (<0.001)	Eval.
(0.2, 0.8)	1.000 (0.920)	0.320 (0.320)	0.320 (0.626)	<b>1.000 (&lt;0.001)</b>	<b>0.909 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.584 (0.416)	0.187 (0.327)	0.327 (0.413)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.658 (0.677)	0.114 (0.228)	0.228 (0.426)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.494 (0.759)	0.085 (0.214)	0.214 (0.332)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.747 (0.759)	0.170 (0.256)	0.256 (0.316)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.746 (0.511)	0.168 (0.339)	0.316 (0.346)	<b>0.938 (&lt;0.001)</b>	<b>0.810 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.548 (0.829)	0.171 (0.279)	0.242 (0.305)	<b>0.701 (&lt;0.001)</b>	<b>0.760 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.542 (0.738)	0.192 (0.371)	0.262 (0.382)	0.516 (0.695)	<b>0.610 (0.007)</b>	Eval.
(0.1, 0.9)	0.500 (0.750)	0.180 (0.348)	0.250 (0.418)	<b>0.999 (&lt;0.001)</b>	0.355 (<0.001)	Time
(0.2, 0.8)	0.663 (0.673)	0.166 (0.408)	0.307 (0.539)	<b>1.000 (&lt;0.001)</b>	<b>0.909 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.661 (0.677)	0.161 (0.342)	0.313 (0.510)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.661 (0.677)	0.161 (0.342)	0.321 (0.494)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.497 (0.757)	0.172 (0.257)	0.243 (0.383)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.586 (0.761)	0.168 (0.305)	0.250 (0.333)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.586 (0.761)	0.175 (0.339)	0.288 (0.341)	<b>0.938 (&lt;0.001)</b>	<b>0.810 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.586 (0.761)	0.211 (0.339)	0.253 (0.330)	<b>0.701 (&lt;0.001)</b>	<b>0.760 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.542 (0.738)	0.192 (0.371)	0.262 (0.382)	0.516 (0.695)	<b>0.610 (0.007)</b>	Time

Table 159. LLVM for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	0.469 (0.444)	0.434 (0.107)	Eval.
(0.2, 0.8)	0.765 (0.765)	0.765 (0.765)	0.765 (1.000)	<b>0.617 (0.004)</b>	0.126 (<0.001)	Eval.
(0.3, 0.7)	0.688 (0.699)	0.688 (0.699)	0.770 (1.000)	0.529 (0.481)	0.070 (<0.001)	Eval.
(0.4, 0.6)	0.026 (0.052)	0.026 (0.052)	0.465 (1.000)	0.544 (0.279)	0.068 (<0.001)	Eval.
(0.5, 0.5)	0.023 (0.053)	0.018 (0.053)	0.406 (0.965)	0.507 (0.873)	0.057 (<0.001)	Eval.
(0.6, 0.4)	0.027 (0.055)	0.027 (0.041)	0.387 (0.945)	0.527 (0.506)	0.056 (<0.001)	Eval.
(0.7, 0.3)	0.049 (0.076)	0.046 (0.067)	0.347 (0.911)	0.525 (0.541)	0.002 (<0.001)	Eval.
(0.8, 0.2)	0.034 (0.051)	0.034 (0.051)	0.284 (0.912)	0.500 (1.000)	0.000 (<0.001)	Eval.
(0.9, 0.1)	0.081 (0.104)	0.081 (0.104)	0.369 (0.847)	0.526 (0.532)	0.000 (<0.001)	Eval.
(0.1, 0.9)	0.367 (0.384)	0.367 (0.378)	0.533 (0.610)	0.469 (0.444)	0.434 (0.107)	Time
(0.2, 0.8)	0.395 (0.415)	0.395 (0.145)	0.583 (0.576)	<b>0.617 (0.004)</b>	0.126 (<0.001)	Time
(0.3, 0.7)	0.099 (0.126)	0.099 (0.118)	0.366 (0.858)	0.529 (0.481)	0.070 (<0.001)	Time
(0.4, 0.6)	0.104 (0.121)	0.095 (0.113)	0.350 (0.858)	0.544 (0.279)	0.068 (<0.001)	Time
(0.5, 0.5)	0.097 (0.114)	0.097 (0.114)	0.328 (0.861)	0.507 (0.873)	0.057 (<0.001)	Time
(0.6, 0.4)	0.093 (0.109)	0.093 (0.109)	0.324 (0.863)	0.527 (0.506)	0.056 (<0.001)	Time
(0.7, 0.3)	0.034 (0.050)	0.034 (0.050)	0.280 (0.914)	0.525 (0.541)	0.002 (<0.001)	Time
(0.8, 0.2)	0.089 (0.104)	0.081 (0.104)	0.362 (0.859)	0.500 (1.000)	0.000 (<0.001)	Time
(0.9, 0.1)	0.081 (0.104)	0.081 (0.104)	0.369 (0.847)	0.526 (0.532)	0.000 (<0.001)	Time

Table 160. TRIMESH for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.149 (0.788)	0.149 (0.393)	0.769 (0.850)	0.564 (0.117)	0.360 (0.001)	Eval.
(0.2, 0.8)	0.975 (1.000)	0.975 (0.983)	0.975 (0.976)	<b>0.624 (0.002)</b>	0.362 (0.001)	Eval.
(0.3, 0.7)	0.509 (0.992)	0.500 (0.999)	0.509 (0.987)	<b>0.875 (&lt;0.001)</b>	0.528 (0.487)	Eval.
(0.4, 0.6)	0.500 (1.000)	0.499 (0.995)	0.499 (0.995)	<b>0.961 (&lt;0.001)</b>	<b>0.725 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.506 (1.000)	0.496 (0.991)	0.503 (0.996)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.952 (0.992)	0.947 (0.958)	0.947 (0.953)	<b>0.887 (&lt;0.001)</b>	<b>0.617 (0.004)</b>	Eval.
(0.7, 0.3)	0.531 (0.991)	0.498 (0.997)	0.513 (0.988)	<b>0.887 (&lt;0.001)</b>	<b>0.628 (0.002)</b>	Eval.
(0.8, 0.2)	0.505 (0.989)	0.500 (1.000)	0.502 (0.991)	<b>0.862 (&lt;0.001)</b>	<b>0.609 (0.008)</b>	Eval.
(0.9, 0.1)	0.501 (1.000)	0.496 (0.991)	0.501 (0.997)	<b>0.897 (&lt;0.001)</b>	<b>0.650 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.662 (0.995)	0.661 (0.992)	0.661 (0.988)	0.564 (0.117)	0.360 (0.001)	Time
(0.2, 0.8)	0.343 (0.998)	0.329 (0.997)	0.343 (0.990)	<b>0.624 (0.002)</b>	0.362 (0.001)	Time
(0.3, 0.7)	0.500 (1.000)	0.499 (0.995)	0.499 (0.995)	<b>0.875 (&lt;0.001)</b>	0.528 (0.487)	Time
(0.4, 0.6)	0.497 (1.000)	0.496 (0.989)	0.496 (0.992)	<b>0.961 (&lt;0.001)</b>	<b>0.725 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.503 (1.000)	0.496 (0.991)	0.501 (0.997)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.504 (1.000)	0.495 (0.997)	0.501 (0.996)	<b>0.887 (&lt;0.001)</b>	<b>0.617 (0.004)</b>	Time
(0.7, 0.3)	0.505 (0.999)	0.500 (1.000)	0.502 (0.998)	<b>0.887 (&lt;0.001)</b>	<b>0.628 (0.002)</b>	Time
(0.8, 0.2)	0.505 (0.999)	0.496 (0.994)	0.501 (0.998)	<b>0.862 (&lt;0.001)</b>	<b>0.609 (0.008)</b>	Time
(0.9, 0.1)	0.501 (1.000)	0.496 (0.991)	0.501 (0.997)	<b>0.897 (&lt;0.001)</b>	<b>0.650 (&lt;0.001)</b>	Time

Table 161. vp8 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	0.736 (1.000)	0.000 (0.877)	0.736 (0.877)	<b>0.582 (0.045)</b>	0.544 (0.277)	Eval.
(0.8, 0.1, 0.1)	0.396 (0.966)	0.034 (0.330)	0.305 (0.330)	<b>0.821 (&lt;0.001)</b>	<b>0.811 (&lt;0.001)</b>	Eval.
(0.1, 0.1, 0.8)	0.683 (0.730)	0.270 (1.000)	0.270 (1.000)	0.463 (0.363)	0.403 (0.017)	Eval.
(0.33, 0.33, 0.33)	0.530 (0.817)	0.219 (0.595)	0.331 (0.883)	<b>0.584 (0.040)</b>	0.544 (0.286)	Eval.
(0.1, 0.8, 0.1)	0.539 (0.787)	0.254 (0.790)	0.290 (0.790)	<b>0.582 (0.045)</b>	0.544 (0.277)	Time
(0.8, 0.1, 0.1)	0.683 (0.730)	0.270 (0.966)	0.270 (0.966)	<b>0.821 (&lt;0.001)</b>	<b>0.811 (&lt;0.001)</b>	Time
(0.1, 0.1, 0.8)	0.685 (0.775)	0.250 (0.778)	0.285 (1.000)	0.463 (0.363)	0.403 (0.017)	Time
(0.33, 0.33, 0.33)	0.530 (0.817)	0.219 (0.595)	0.331 (0.883)	<b>0.584 (0.040)</b>	0.544 (0.286)	Time

Table 162. hSQLDB for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	0.023 (0.069)	0.039 (0.065)	0.055 (1.000)	0.474 (0.526)	0.424 (0.065)	Eval.
(0.8, 0.1, 0.1)	0.025 (0.103)	0.038 (0.103)	0.060 (1.000)	0.481 (0.644)	0.436 (0.120)	Eval.
(0.1, 0.1, 0.8)	0.031 (0.096)	0.039 (0.087)	0.059 (0.987)	0.548 (0.241)	0.427 (0.073)	Eval.
(0.33, 0.33, 0.33)	0.023 (0.094)	0.031 (0.070)	0.052 (0.995)	0.495 (0.897)	0.438 (0.128)	Eval.
(0.1, 0.8, 0.1)	0.024 (0.088)	0.032 (0.073)	0.052 (0.994)	0.474 (0.526)	0.424 (0.065)	Time
(0.8, 0.1, 0.1)	0.026 (0.097)	0.034 (0.079)	0.055 (0.992)	0.481 (0.644)	0.436 (0.120)	Time
(0.1, 0.1, 0.8)	0.024 (0.095)	0.032 (0.076)	0.053 (0.994)	0.548 (0.241)	0.427 (0.073)	Time
(0.33, 0.33, 0.33)	0.023 (0.094)	0.031 (0.070)	0.052 (0.995)	0.495 (0.897)	0.438 (0.128)	Time

Table 163. 5As-1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.029 (0.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	1.000 (0.265)	0.569 (0.569)	1.000 (0.979)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Eval.
(0.3, 0.7)	0.505 (0.629)	0.287 (0.403)	0.505 (0.989)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Eval.
(0.4, 0.6)	0.476 (0.410)	0.095 (0.109)	0.590 (0.819)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.5, 0.5)	0.476 (0.410)	0.095 (0.109)	0.590 (0.819)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.6, 0.4)	0.338 (0.291)	0.077 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.7, 0.3)	0.212 (0.242)	0.060 (0.075)	0.550 (0.901)	0.500 (1.000)	0.000 (<0.001)	Eval.
(0.8, 0.2)	0.180 (0.244)	0.021 (0.037)	0.564 (0.703)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.9, 0.1)	0.128 (0.232)	0.068 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Eval.
(0.1, 0.9)	0.240 (0.251)	0.188 (0.204)	0.747 (0.828)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.240 (0.251)	0.173 (0.204)	0.493 (0.828)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Time
(0.3, 0.7)	0.128 (0.312)	0.068 (0.087)	0.419 (0.872)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Time
(0.4, 0.6)	0.171 (0.309)	0.090 (0.103)	0.558 (0.829)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.5, 0.5)	0.274 (0.312)	0.068 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.6, 0.4)	0.274 (0.312)	0.068 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.7, 0.3)	0.212 (0.242)	0.060 (0.075)	0.550 (0.901)	0.500 (1.000)	0.000 (<0.001)	Time
(0.8, 0.2)	0.128 (0.232)	0.068 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.9, 0.1)	0.128 (0.232)	0.068 (0.087)	0.709 (0.872)	<b>1.000 (&lt;0.001)</b>	0.500 (1.000)	Time

Table 164. 5AS-2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.000 (0.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	0.716 (0.653)	0.689 (0.689)	0.689 (0.689)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.928 (0.678)	0.639 (0.809)	0.639 (0.809)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.164 (0.988)	0.077 (0.143)	0.077 (0.143)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.241 (0.807)	0.113 (0.210)	0.113 (0.210)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.533 (0.807)	0.210 (0.246)	0.210 (0.246)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.241 (0.934)	0.113 (0.246)	0.113 (0.246)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.8, 0.2)	0.241 (0.983)	0.113 (0.246)	0.113 (0.246)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.9, 0.1)	0.636 (0.797)	0.500 (0.654)	0.500 (0.654)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.1, 0.9)	0.513 (0.776)	0.513 (0.663)	0.513 (0.663)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.646 (0.776)	0.445 (0.663)	0.445 (0.663)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.636 (0.797)	0.500 (0.654)	0.500 (0.654)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.636 (0.797)	0.500 (0.654)	0.500 (0.654)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.458 (0.865)	0.367 (0.436)	0.367 (0.436)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.458 (0.865)	0.367 (0.462)	0.367 (0.462)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.452 (0.968)	0.213 (0.462)	0.213 (0.462)	0.500 (1.000)	0.500 (1.000)	Time
(0.8, 0.2)	0.636 (0.797)	0.500 (0.654)	0.500 (0.654)	0.500 (1.000)	0.500 (1.000)	Time
(0.9, 0.1)	0.636 (0.797)	0.500 (0.654)	0.500 (0.654)	0.500 (1.000)	0.500 (1.000)	Time

Table 165. 5AS-3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.2, 0.8)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.3, 0.7)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.4, 0.6)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.5, 0.5)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.979 (1.000)	0.887 (1.000)	0.887 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.898 (1.000)	0.561 (0.917)	0.561 (0.917)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.857 (0.754)	0.388 (0.885)	0.388 (0.885)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.841 (1.000)	0.500 (0.887)	0.500 (0.887)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.856 (0.956)	0.548 (0.898)	0.548 (0.898)	0.500 (1.000)	0.500 (1.000)	Time
(0.2, 0.8)	0.548 (0.956)	0.375 (0.898)	0.375 (0.898)	0.500 (1.000)	0.500 (1.000)	Time
(0.3, 0.7)	0.500 (1.000)	0.500 (0.887)	0.500 (0.887)	0.500 (1.000)	0.500 (1.000)	Time
(0.4, 0.6)	0.500 (1.000)	0.500 (0.887)	0.500 (0.887)	0.500 (1.000)	0.500 (1.000)	Time
(0.5, 0.5)	0.841 (1.000)	0.500 (1.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.841 (1.000)	0.500 (1.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.898 (1.000)	0.561 (0.917)	0.561 (0.917)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.841 (1.000)	0.500 (0.887)	0.500 (0.887)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.841 (1.000)	0.500 (0.887)	0.500 (0.887)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 166. 10AS-1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.000 (0.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	1.000 (0.265)	0.569 (0.569)	0.569 (0.569)	<b>1.000 (&lt;0.001)</b>	<b>0.975 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.505 (0.629)	0.287 (0.403)	0.287 (0.575)	<b>1.000 (&lt;0.001)</b>	<b>0.975 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.807 (0.694)	0.162 (0.185)	0.349 (0.807)	<b>1.000 (&lt;0.001)</b>	0.480 (0.625)	Eval.
(0.5, 0.5)	0.807 (0.694)	0.162 (0.185)	0.403 (0.807)	<b>1.000 (&lt;0.001)</b>	0.480 (0.625)	Eval.
(0.6, 0.4)	0.667 (0.574)	0.153 (0.172)	0.667 (1.000)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.7, 0.3)	0.406 (0.462)	0.114 (0.143)	0.500 (1.000)	0.500 (1.000)	0.000 (<0.001)	Eval.
(0.8, 0.2)	0.320 (0.433)	0.038 (0.065)	0.652 (0.864)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.9, 0.1)	0.189 (0.343)	0.100 (0.129)	0.500 (0.927)	<b>1.000 (&lt;0.001)</b>	0.495 (0.903)	Eval.
(0.1, 0.9)	0.335 (0.351)	0.261 (0.285)	0.590 (0.821)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.335 (0.351)	0.241 (0.285)	0.384 (0.821)	<b>1.000 (&lt;0.001)</b>	<b>0.975 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.189 (0.462)	0.100 (0.129)	0.250 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>0.975 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.253 (0.457)	0.133 (0.153)	0.333 (1.000)	<b>1.000 (&lt;0.001)</b>	0.480 (0.625)	Time
(0.5, 0.5)	0.541 (0.616)	0.133 (0.172)	0.667 (1.000)	<b>1.000 (&lt;0.001)</b>	0.480 (0.625)	Time
(0.6, 0.4)	0.406 (0.462)	0.100 (0.129)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.7, 0.3)	0.406 (0.462)	0.114 (0.143)	0.500 (0.927)	0.500 (1.000)	0.000 (<0.001)	Time
(0.8, 0.2)	0.181 (0.326)	0.095 (0.123)	0.476 (0.931)	<b>1.000 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.9, 0.1)	0.189 (0.343)	0.100 (0.129)	0.500 (0.927)	<b>1.000 (&lt;0.001)</b>	0.495 (0.903)	Time

Table 167. 10AS-2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.530 (0.464)	0.525 (0.536)	Eval.
(0.2, 0.8)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.500 (1.000)	0.495 (0.903)	Eval.
(0.3, 0.7)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.495 (0.903)	Eval.
(0.4, 0.6)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.495 (0.903)	Eval.
(0.5, 0.5)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.761 (1.000)	0.675 (0.761)	0.675 (0.761)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.592 (1.000)	0.362 (0.592)	0.362 (0.592)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.501 (0.861)	0.220 (0.501)	0.220 (0.501)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.640 (0.964)	0.381 (0.675)	0.381 (0.675)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.667 (0.925)	0.427 (0.700)	0.427 (0.700)	0.530 (0.464)	0.525 (0.536)	Time
(0.2, 0.8)	0.427 (0.925)	0.292 (0.700)	0.292 (0.700)	0.500 (1.000)	0.495 (0.903)	Time
(0.3, 0.7)	0.381 (1.000)	0.381 (0.675)	0.381 (0.675)	0.500 (1.000)	0.495 (0.903)	Time
(0.4, 0.6)	0.500 (1.000)	0.500 (0.887)	0.500 (0.887)	0.500 (1.000)	0.495 (0.903)	Time
(0.5, 0.5)	0.640 (1.000)	0.381 (0.761)	0.381 (0.761)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.640 (1.000)	0.381 (0.761)	0.381 (0.761)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.592 (0.972)	0.362 (0.592)	0.362 (0.592)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.498 (0.972)	0.296 (0.525)	0.296 (0.525)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.640 (0.964)	0.381 (0.675)	0.381 (0.675)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 168. 10AS-3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.500 (1.000)	0.450 (0.222)	Eval.
(0.2, 0.8)	1.000 (1.000)	0.841 (0.841)	0.841 (0.841)	<b>1.000 (&lt;0.001)</b>	<b>0.935 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.500 (1.000)	0.420 (0.654)	0.420 (0.654)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.833 (0.886)	0.316 (0.336)	0.316 (0.336)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.869 (0.863)	0.335 (0.380)	0.335 (0.380)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.833 (0.886)	0.279 (0.316)	0.279 (0.316)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.723 (0.886)	0.208 (0.316)	0.208 (0.316)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.723 (0.761)	0.208 (0.316)	0.208 (0.316)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.389 (0.765)	0.260 (0.410)	0.260 (0.410)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.541 (0.669)	0.444 (0.554)	0.444 (0.556)	0.500 (1.000)	0.450 (0.222)	Time
(0.2, 0.8)	0.525 (0.669)	0.333 (0.554)	0.333 (0.556)	<b>1.000 (&lt;0.001)</b>	<b>0.935 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.389 (0.765)	0.260 (0.450)	0.260 (0.450)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.389 (0.765)	0.260 (0.450)	0.260 (0.450)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.884 (0.765)	0.335 (0.450)	0.335 (0.450)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.750 (0.800)	0.284 (0.382)	0.284 (0.382)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.723 (0.886)	0.208 (0.316)	0.208 (0.316)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.389 (0.765)	0.260 (0.410)	0.260 (0.410)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.389 (0.765)	0.260 (0.410)	0.260 (0.410)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 169. 15AS-1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.000 (0.029)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	1.000 (0.265)	0.569 (0.569)	0.569 (0.569)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.505 (0.629)	0.287 (0.403)	0.287 (0.564)	<b>0.990 (&lt;0.001)</b>	<b>0.996 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.878 (0.667)	0.176 (0.201)	0.213 (0.535)	<b>0.990 (&lt;0.001)</b>	<b>0.638 (0.001)</b>	Eval.
(0.5, 0.5)	0.807 (0.694)	0.162 (0.185)	0.403 (0.807)	<b>0.990 (&lt;0.001)</b>	<b>0.616 (0.005)</b>	Eval.
(0.6, 0.4)	0.667 (0.574)	0.153 (0.172)	0.406 (1.000)	<b>0.990 (&lt;0.001)</b>	0.010 (<0.001)	Eval.
(0.7, 0.3)	0.534 (0.609)	0.151 (0.188)	0.659 (0.967)	0.450 (0.226)	0.000 (<0.001)	Eval.
(0.8, 0.2)	0.250 (0.430)	0.042 (0.073)	0.459 (0.950)	<b>0.990 (&lt;0.001)</b>	0.000 (<0.001)	Eval.
(0.9, 0.1)	0.189 (0.343)	0.100 (0.143)	0.500 (0.927)	<b>1.000 (&lt;0.001)</b>	0.461 (0.338)	Eval.
(0.1, 0.9)	0.352 (0.369)	0.275 (0.300)	0.452 (0.811)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.417 (0.437)	0.300 (0.355)	0.479 (0.777)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.253 (0.550)	0.133 (0.172)	0.333 (1.000)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.253 (0.457)	0.133 (0.172)	0.333 (1.000)	<b>0.990 (&lt;0.001)</b>	<b>0.605 (0.010)</b>	Time
(0.5, 0.5)	0.408 (0.616)	0.133 (0.172)	0.406 (0.967)	<b>0.990 (&lt;0.001)</b>	<b>0.605 (0.010)</b>	Time
(0.6, 0.4)	0.541 (0.616)	0.133 (0.172)	0.530 (0.953)	<b>0.990 (&lt;0.001)</b>	0.010 (<0.001)	Time
(0.7, 0.3)	0.326 (0.438)	0.122 (0.152)	0.532 (0.922)	0.440 (0.143)	0.000 (<0.001)	Time
(0.8, 0.2)	0.189 (0.343)	0.100 (0.143)	0.500 (0.927)	<b>0.990 (&lt;0.001)</b>	0.000 (<0.001)	Time
(0.9, 0.1)	0.189 (0.343)	0.100 (0.143)	0.500 (0.927)	<b>1.000 (&lt;0.001)</b>	0.440 (0.143)	Time

Table 170. 15AS-2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.490 (0.815)	0.490 (0.810)	Eval.
(0.2, 0.8)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.496 (0.912)	0.495 (0.897)	Eval.
(0.3, 0.7)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.495 (0.903)	0.494 (0.893)	Eval.
(0.4, 0.6)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.480 (0.627)	0.480 (0.621)	Eval.
(0.5, 0.5)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.501 (0.988)	0.500 (1.000)	Eval.
(0.6, 0.4)	0.667 (1.000)	0.667 (1.000)	0.667 (1.000)	0.485 (0.709)	0.485 (0.705)	Eval.
(0.7, 0.3)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.490 (0.813)	0.490 (0.800)	Eval.
(0.8, 0.2)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.491 (0.818)	0.490 (0.809)	Eval.
(0.9, 0.1)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.537 (0.370)	0.534 (0.399)	Eval.
(0.1, 0.9)	0.600 (1.000)	0.600 (1.000)	0.600 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.2, 0.8)	0.400 (1.000)	0.400 (1.000)	0.400 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.3, 0.7)	0.400 (1.000)	0.400 (1.000)	0.400 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.4, 0.6)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.5, 0.5)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.6, 0.4)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.7, 0.3)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.8, 0.2)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time
(0.9, 0.1)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.475 (0.541)	0.475 (0.541)	Time

Table 171. 15AS-3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.475 (0.540)	0.470 (0.464)	Eval.
(0.2, 0.8)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.479 (0.614)	0.475 (0.536)	Eval.
(0.3, 0.7)	0.500 (1.000)	0.500 (1.000)	0.500 (1.000)	0.470 (0.460)	0.465 (0.390)	Eval.
(0.4, 0.6)	0.627 (1.000)	0.627 (1.000)	0.627 (1.000)	<b>0.857 (&lt;0.001)</b>	<b>0.857 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.625 (1.000)	0.625 (0.920)	0.625 (0.920)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.797 (1.000)	0.674 (0.736)	0.674 (0.736)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.500 (1.000)	0.500 (0.736)	0.500 (0.736)	0.502 (0.966)	0.506 (0.882)	Eval.
(0.8, 0.2)	0.500 (1.000)	0.500 (0.736)	0.500 (0.736)	0.496 (0.928)	0.501 (0.972)	Eval.
(0.9, 0.1)	0.625 (1.000)	0.625 (0.844)	0.625 (0.843)	0.496 (0.917)	0.501 (0.988)	Eval.
(0.1, 0.9)	0.769 (1.000)	0.769 (0.904)	0.769 (0.903)	0.460 (0.328)	0.455 (0.272)	Time
(0.2, 0.8)	0.385 (1.000)	0.385 (0.903)	0.385 (0.900)	0.460 (0.328)	0.455 (0.272)	Time
(0.3, 0.7)	0.627 (1.000)	0.627 (0.846)	0.627 (0.846)	0.460 (0.328)	0.455 (0.272)	Time
(0.4, 0.6)	0.625 (1.000)	0.625 (0.844)	0.625 (0.843)	<b>0.865 (&lt;0.001)</b>	<b>0.865 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.625 (1.000)	0.625 (0.920)	0.625 (0.920)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.500 (1.000)	0.500 (0.736)	0.500 (0.736)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.500 (1.000)	0.500 (0.736)	0.500 (0.736)	0.460 (0.328)	0.465 (0.392)	Time
(0.8, 0.2)	0.625 (1.000)	0.625 (0.844)	0.625 (0.844)	0.460 (0.328)	0.465 (0.392)	Time
(0.9, 0.1)	0.625 (1.000)	0.625 (0.844)	0.625 (0.843)	0.460 (0.328)	0.465 (0.392)	Time



Table 172. 50As for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.304 (0.761)	0.484 (1.000)	0.273 (0.548)	0.417 (0.043)	0.528 (0.489)	Eval.
(0.2, 0.8)	0.696 (0.683)	0.696 (0.925)	0.696 (0.827)	<b>0.699 (&lt;0.001)</b>	<b>0.788 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.644 (0.546)	0.583 (0.961)	0.521 (0.932)	<b>0.940 (&lt;0.001)</b>	<b>0.971 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.673 (0.804)	0.544 (1.000)	0.544 (1.000)	<b>0.931 (&lt;0.001)</b>	<b>0.935 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.686 (0.844)	0.493 (0.956)	0.463 (0.889)	<b>0.965 (&lt;0.001)</b>	<b>0.990 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.716 (0.800)	0.613 (0.972)	0.613 (0.923)	<b>0.928 (&lt;0.001)</b>	<b>0.804 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.590 (0.938)	0.509 (0.954)	0.498 (0.923)	0.428 (0.077)	0.329 (<0.001)	Eval.
(0.8, 0.2)	0.593 (0.997)	0.492 (0.950)	0.492 (0.950)	<b>0.796 (&lt;0.001)</b>	0.392 (0.008)	Eval.
(0.9, 0.1)	0.571 (1.000)	0.444 (0.897)	0.457 (0.883)	<b>1.000 (&lt;0.001)</b>	0.548 (0.240)	Eval.
(0.1, 0.9)	0.656 (1.000)	0.576 (0.976)	0.576 (0.954)	0.130 (<0.001)	0.205 (<0.001)	Time
(0.2, 0.8)	0.673 (0.991)	0.610 (0.994)	0.601 (0.926)	0.520 (0.625)	<b>0.660 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.810 (0.991)	0.734 (1.000)	0.734 (0.979)	<b>0.930 (&lt;0.001)</b>	<b>0.960 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.611 (0.931)	0.560 (0.986)	0.562 (0.964)	<b>0.900 (&lt;0.001)</b>	<b>0.880 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.582 (0.936)	0.522 (0.962)	0.511 (0.946)	<b>0.960 (&lt;0.001)</b>	<b>0.990 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.666 (1.000)	0.594 (0.765)	0.603 (0.762)	0.000 (<0.001)	0.000 (<0.001)	Time
(0.7, 0.3)	0.673 (1.000)	0.592 (0.762)	0.592 (0.762)	0.000 (<0.001)	0.000 (<0.001)	Time
(0.8, 0.2)	0.645 (1.000)	0.556 (0.754)	0.565 (0.721)	0.000 (<0.001)	0.000 (<0.001)	Time
(0.9, 0.1)	0.708 (1.000)	0.625 (0.647)	0.634 (0.637)	0.000 (<0.001)	0.000 (<0.001)	Time

Table 173. 5AS-3o for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	1.000 (0.000)	0.000 (0.000)	0.000 (0.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.1, 0.1)	1.000 (0.708)	0.384 (0.384)	0.384 (0.384)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.1, 0.8)	0.942 (0.725)	0.362 (1.000)	0.362 (1.000)	0.500 (1.000)	0.500 (1.000)	Eval.
(0.33, 0.33, 0.33)	0.281 (0.744)	0.281 (0.481)	0.281 (0.481)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.942 (0.725)	0.362 (1.000)	0.362 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.1, 0.1)	0.942 (0.725)	0.362 (1.000)	0.362 (1.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.1, 0.1, 0.8)	0.942 (0.725)	0.377 (1.000)	0.362 (1.000)	0.500 (1.000)	0.500 (1.000)	Time
(0.33, 0.33, 0.33)	0.419 (0.619)	0.419 (0.716)	0.419 (0.716)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 174. 15AS-3o for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.511 (0.791)	0.520 (0.628)	Eval.
(0.8, 0.1, 0.1)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.485 (0.714)	0.495 (0.901)	Eval.
(0.1, 0.1, 0.8)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.501 (0.988)	0.483 (0.681)	Eval.
(0.33, 0.33, 0.33)	0.168 (1.000)	0.168 (0.430)	0.168 (0.430)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.475 (0.541)	0.485 (0.714)	Time
(0.8, 0.1, 0.1)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.475 (0.541)	0.485 (0.714)	Time
(0.1, 0.1, 0.8)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.470 (0.464)	0.455 (0.272)	Time
(0.33, 0.33, 0.33)	0.168 (1.000)	0.168 (0.430)	0.168 (0.430)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 175. 15AS-3o for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.511 (0.791)	0.520 (0.628)	Eval.
(0.8, 0.1, 0.1)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)	0.485 (0.714)	0.495 (0.901)	Eval.
(0.1, 0.1, 0.8)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.501 (0.988)	0.483 (0.681)	Eval.
(0.33, 0.33, 0.33)	0.168 (1.000)	0.168 (0.430)	0.168 (0.430)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.475 (0.541)	0.485 (0.714)	Time
(0.8, 0.1, 0.1)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.475 (0.541)	0.485 (0.714)	Time
(0.1, 0.1, 0.8)	0.000 (1.000)	0.000 (1.000)	0.000 (1.000)	0.470 (0.464)	0.455 (0.272)	Time
(0.33, 0.33, 0.33)	0.168 (1.000)	0.168 (0.430)	0.168 (0.430)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 176. NRP-E1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.002 (0.142)	0.504 (0.814)	0.622 (0.507)	0.161 (<0.001)	0.016 (<0.001)	Eval.
(0.2, 0.8)	0.440 (0.679)	0.519 (0.726)	0.644 (0.433)	0.544 (0.281)	0.447 (0.197)	Eval.
(0.3, 0.7)	0.671 (0.840)	0.518 (0.736)	0.636 (0.448)	<b>0.721 (&lt;0.001)</b>	<b>0.756 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.556 (1.000)	0.207 (0.655)	0.314 (0.455)	<b>0.930 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.525 (0.689)	0.197 (0.553)	0.271 (0.377)	<b>0.980 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.895 (0.759)	0.137 (0.394)	0.171 (0.291)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.889 (0.747)	0.124 (0.337)	0.157 (0.312)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.898 (0.501)	0.176 (0.355)	0.202 (0.293)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.833 (0.584)	0.256 (0.404)	0.290 (0.382)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.806 (0.752)	0.256 (0.434)	0.299 (0.387)	0.156 (<0.001)	0.014 (<0.001)	Time
(0.2, 0.8)	0.574 (0.753)	0.255 (0.454)	0.301 (0.367)	<b>0.584 (0.041)</b>	0.511 (0.796)	Time
(0.3, 0.7)	0.571 (0.756)	0.256 (0.463)	0.302 (0.329)	<b>0.720 (&lt;0.001)</b>	<b>0.753 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.635 (0.738)	0.287 (0.507)	0.334 (0.343)	<b>0.930 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.798 (0.607)	0.261 (0.454)	0.299 (0.296)	<b>0.980 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.817 (0.642)	0.229 (0.411)	0.261 (0.291)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.898 (0.681)	0.176 (0.355)	0.202 (0.293)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.831 (0.593)	0.267 (0.422)	0.293 (0.272)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.833 (0.584)	0.256 (0.404)	0.290 (0.382)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 177. NRP-E2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.062 (0.062)	0.662 (0.820)	0.526 (0.651)	0.162 (<0.001)	0.067 (<0.001)	Eval.
(0.2, 0.8)	1.000 (1.000)	0.633 (0.648)	0.575 (0.489)	<b>0.806 (&lt;0.001)</b>	<b>0.845 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.622 (1.000)	0.472 (0.318)	0.441 (0.285)	<b>0.954 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.920 (0.622)	0.259 (0.421)	0.236 (0.377)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.696 (0.733)	0.243 (0.321)	0.207 (0.325)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.681 (0.799)	0.239 (0.283)	0.200 (0.302)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.812 (0.766)	0.210 (0.202)	0.197 (0.243)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.768 (0.478)	0.158 (0.208)	0.120 (0.191)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.882 (0.662)	0.223 (0.296)	0.190 (0.305)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.718 (0.705)	0.239 (0.328)	0.206 (0.349)	0.157 (<0.001)	0.064 (<0.001)	Time
(0.2, 0.8)	0.667 (0.698)	0.234 (0.333)	0.206 (0.355)	<b>0.796 (&lt;0.001)</b>	<b>0.831 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.676 (0.722)	0.202 (0.350)	0.174 (0.335)	<b>0.955 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.703 (0.717)	0.223 (0.355)	0.187 (0.343)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.698 (0.715)	0.223 (0.296)	0.190 (0.303)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.881 (0.686)	0.242 (0.288)	0.196 (0.312)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.783 (0.742)	0.214 (0.238)	0.179 (0.245)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.873 (0.713)	0.195 (0.227)	0.145 (0.253)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.882 (0.672)	0.223 (0.296)	0.190 (0.305)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 178. NRP-E3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.000 (0.000)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	0.869 (0.800)	0.869 (0.869)	0.869 (0.869)	<b>0.900 (&lt;0.001)</b>	<b>0.905 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.591 (0.882)	0.513 (0.822)	0.513 (0.822)	<b>0.999 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.439 (1.000)	0.433 (0.669)	0.433 (0.669)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.528 (0.937)	0.335 (0.521)	0.335 (0.517)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.723 (0.921)	0.484 (0.535)	0.484 (0.529)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.817 (0.905)	0.433 (0.584)	0.433 (0.584)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.680 (0.849)	0.365 (0.534)	0.365 (0.534)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.573 (0.933)	0.356 (0.553)	0.356 (0.549)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.712 (0.672)	0.572 (0.708)	0.572 (0.705)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.602 (0.670)	0.411 (0.709)	0.408 (0.700)	<b>0.894 (&lt;0.001)</b>	<b>0.900 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.592 (0.993)	0.380 (0.586)	0.380 (0.586)	<b>0.999 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.577 (0.974)	0.367 (0.566)	0.367 (0.566)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.596 (0.934)	0.347 (0.539)	0.347 (0.535)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.715 (0.934)	0.347 (0.585)	0.347 (0.585)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.715 (0.913)	0.434 (0.585)	0.434 (0.585)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.678 (0.913)	0.347 (0.560)	0.347 (0.535)	<b>0.987 (&lt;0.001)</b>	<b>0.993 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.625 (0.931)	0.363 (0.565)	0.363 (0.561)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 179. NRP-E4 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.090 (0.140)	0.685 (0.686)	0.614 (0.395)	0.087 (<0.001)	0.017 (<0.001)	Eval.
(0.2, 0.8)	0.593 (0.817)	0.707 (0.599)	0.632 (0.384)	0.575 (0.066)	<b>0.746 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.747 (1.000)	0.667 (0.465)	0.597 (0.292)	<b>0.846 (&lt;0.001)</b>	<b>0.971 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.764 (0.948)	0.295 (0.576)	0.200 (0.370)	<b>0.978 (&lt;0.001)</b>	<b>0.993 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.730 (0.708)	0.231 (0.411)	0.170 (0.271)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.848 (0.755)	0.170 (0.296)	0.113 (0.203)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.848 (0.708)	0.187 (0.306)	0.146 (0.229)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.866 (0.432)	0.208 (0.337)	0.173 (0.264)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.797 (0.534)	0.323 (0.435)	0.290 (0.399)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.734 (0.992)	0.324 (0.446)	0.283 (0.404)	0.080 (<0.001)	0.012 (<0.001)	Time
(0.2, 0.8)	0.748 (0.996)	0.350 (0.497)	0.304 (0.435)	0.576 (0.062)	<b>0.750 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.778 (0.790)	0.329 (0.510)	0.281 (0.413)	<b>0.842 (&lt;0.001)</b>	<b>0.970 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.767 (0.552)	0.313 (0.492)	0.268 (0.382)	<b>0.976 (&lt;0.001)</b>	<b>0.992 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.764 (0.620)	0.270 (0.416)	0.230 (0.324)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.756 (0.642)	0.252 (0.374)	0.217 (0.296)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.874 (0.665)	0.210 (0.340)	0.175 (0.266)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.777 (0.587)	0.288 (0.422)	0.247 (0.338)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.797 (0.534)	0.323 (0.435)	0.290 (0.399)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 180. NRP-G1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.268 (1.000)	0.000 (0.000)	0.000 (0.000)	<b>0.855 (&lt;0.001)</b>	<b>0.819 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	0.852 (0.879)	0.719 (0.719)	0.719 (0.719)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.587 (0.735)	0.422 (0.669)	0.422 (0.669)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.805 (0.867)	0.421 (0.652)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.984 (0.867)	0.421 (0.659)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.940 (0.733)	0.620 (0.650)	0.620 (0.630)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.935 (0.705)	0.454 (0.635)	0.446 (0.630)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.925 (0.705)	0.405 (0.611)	0.405 (0.611)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.852 (0.867)	0.421 (0.659)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.874 (0.797)	0.636 (0.779)	0.636 (0.781)	<b>0.740 (&lt;0.001)</b>	<b>0.703 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.604 (0.798)	0.431 (0.786)	0.427 (0.786)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.809 (0.865)	0.425 (0.659)	0.425 (0.659)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.852 (0.867)	0.421 (0.652)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.938 (0.867)	0.421 (0.659)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.984 (0.867)	0.421 (0.668)	0.421 (0.663)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.960 (0.867)	0.469 (0.663)	0.469 (0.663)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.852 (0.867)	0.421 (0.663)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.852 (0.867)	0.421 (0.659)	0.421 (0.652)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 181. NRP-G2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.426 (0.332)	0.000 (0.121)	0.431 (0.812)	<b>0.845 (&lt;0.001)</b>	0.448 (0.207)	Eval.
(0.2, 0.8)	0.537 (0.793)	0.439 (0.439)	0.459 (0.352)	<b>0.987 (&lt;0.001)</b>	<b>0.982 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.868 (0.785)	0.351 (0.584)	0.464 (0.253)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.686 (0.894)	0.275 (0.427)	0.282 (0.406)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.662 (0.509)	0.231 (0.357)	0.254 (0.330)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.784 (0.485)	0.361 (0.385)	0.361 (0.272)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.738 (0.466)	0.271 (0.389)	0.270 (0.163)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.724 (0.490)	0.237 (0.361)	0.234 (0.362)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.796 (0.492)	0.278 (0.427)	0.297 (0.378)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.772 (0.713)	0.474 (0.592)	0.485 (0.321)	<b>0.807 (&lt;0.001)</b>	0.347 (<0.001)	Time
(0.2, 0.8)	0.719 (0.714)	0.295 (0.574)	0.446 (0.342)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.739 (0.814)	0.296 (0.460)	0.304 (0.437)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.796 (0.492)	0.266 (0.413)	0.289 (0.400)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.732 (0.514)	0.255 (0.393)	0.273 (0.350)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.732 (0.506)	0.265 (0.397)	0.273 (0.341)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.733 (0.487)	0.276 (0.395)	0.273 (0.340)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.730 (0.517)	0.261 (0.390)	0.269 (0.342)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.732 (0.514)	0.255 (0.393)	0.273 (0.348)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 182. NRP-G3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.000 (0.165)	0.277 (0.489)	0.663 (0.523)	0.229 (<0.001)	0.012 (<0.001)	Eval.
(0.2, 0.8)	0.647 (0.785)	0.402 (0.414)	0.692 (0.463)	<b>0.808 (&lt;0.001)</b>	0.576 (0.064)	Eval.
(0.3, 0.7)	0.768 (0.959)	0.429 (0.491)	0.705 (0.473)	<b>0.904 (&lt;0.001)</b>	<b>0.811 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.747 (0.660)	0.300 (0.506)	0.514 (0.422)	<b>0.988 (&lt;0.001)</b>	<b>0.988 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.625 (0.596)	0.296 (0.438)	0.429 (0.318)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.787 (0.646)	0.328 (0.388)	0.380 (0.229)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.829 (0.681)	0.213 (0.350)	0.330 (0.259)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.842 (0.394)	0.294 (0.427)	0.389 (0.255)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.839 (0.586)	0.291 (0.429)	0.327 (0.469)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.826 (0.877)	0.375 (0.539)	0.435 (0.463)	0.256 (<0.001)	0.013 (<0.001)	Time
(0.2, 0.8)	0.741 (0.872)	0.323 (0.541)	0.440 (0.459)	<b>0.810 (&lt;0.001)</b>	<b>0.584 (0.041)</b>	Time
(0.3, 0.7)	0.727 (0.678)	0.283 (0.515)	0.426 (0.412)	<b>0.913 (&lt;0.001)</b>	<b>0.832 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.811 (0.623)	0.331 (0.500)	0.426 (0.397)	<b>0.984 (&lt;0.001)</b>	<b>0.983 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.839 (0.586)	0.294 (0.434)	0.397 (0.348)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.844 (0.586)	0.303 (0.436)	0.418 (0.309)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.842 (0.591)	0.297 (0.430)	0.392 (0.254)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.844 (0.586)	0.296 (0.431)	0.356 (0.349)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.839 (0.586)	0.291 (0.429)	0.327 (0.469)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 183. NRP-G4 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.035 (0.108)	0.650 (0.595)	0.624 (0.320)	0.045 (<0.001)	0.000 (<0.001)	Eval.
(0.2, 0.8)	0.287 (0.287)	0.666 (0.552)	0.639 (0.326)	0.100 (<0.001)	0.020 (<0.001)	Eval.
(0.3, 0.7)	0.236 (0.508)	0.674 (0.546)	0.638 (0.332)	0.240 (<0.001)	0.190 (<0.001)	Eval.
(0.4, 0.6)	0.371 (0.805)	0.608 (0.635)	0.556 (0.367)	<b>0.702 (&lt;0.001)</b>	<b>0.835 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.391 (0.848)	0.636 (0.566)	0.588 (0.311)	<b>0.810 (&lt;0.001)</b>	<b>0.970 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.942 (0.971)	0.697 (0.478)	0.652 (0.267)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.749 (1.000)	0.516 (0.317)	0.497 (0.184)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.654 (0.992)	0.221 (0.520)	0.197 (0.308)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.822 (0.826)	0.405 (0.645)	0.377 (0.544)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.859 (1.000)	0.531 (0.539)	0.509 (0.428)	0.046 (<0.001)	0.000 (<0.001)	Time
(0.2, 0.8)	0.396 (1.000)	0.535 (0.572)	0.517 (0.410)	0.100 (<0.001)	0.020 (<0.001)	Time
(0.3, 0.7)	0.396 (1.000)	0.538 (0.597)	0.526 (0.370)	0.240 (<0.001)	0.190 (<0.001)	Time
(0.4, 0.6)	0.448 (1.000)	0.617 (0.656)	0.603 (0.391)	<b>0.701 (&lt;0.001)</b>	<b>0.832 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.970 (1.000)	0.627 (0.601)	0.611 (0.346)	<b>0.810 (&lt;0.001)</b>	<b>0.970 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.859 (1.000)	0.570 (0.468)	0.555 (0.279)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.677 (1.000)	0.339 (0.441)	0.318 (0.262)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.809 (0.883)	0.386 (0.667)	0.361 (0.426)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.822 (0.898)	0.405 (0.645)	0.377 (0.544)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 184. NRP-M1 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.284 (0.219)	0.138 (0.468)	0.630 (0.655)	0.547 (0.253)	0.163 (<0.001)	Eval.
(0.2, 0.8)	0.575 (0.960)	0.282 (0.304)	0.298 (0.211)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.598 (1.000)	0.158 (0.249)	0.186 (0.159)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.645 (0.812)	0.129 (0.204)	0.129 (0.194)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.795 (0.660)	0.124 (0.202)	0.128 (0.175)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.898 (0.579)	0.179 (0.216)	0.179 (0.184)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.807 (0.587)	0.147 (0.200)	0.139 (0.157)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.813 (0.665)	0.124 (0.180)	0.123 (0.182)	<b>0.917 (&lt;0.001)</b>	<b>0.998 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.774 (0.800)	0.131 (0.212)	0.135 (0.184)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.742 (0.759)	0.224 (0.299)	0.224 (0.209)	0.496 (0.914)	0.132 (<0.001)	Time
(0.2, 0.8)	0.567 (0.778)	0.124 (0.256)	0.132 (0.194)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.694 (0.811)	0.130 (0.206)	0.130 (0.196)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.753 (0.803)	0.125 (0.201)	0.127 (0.181)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.781 (0.764)	0.127 (0.206)	0.131 (0.179)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.827 (0.715)	0.136 (0.224)	0.142 (0.198)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.811 (0.714)	0.162 (0.219)	0.161 (0.191)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.772 (0.657)	0.122 (0.199)	0.128 (0.164)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.753 (0.756)	0.131 (0.213)	0.135 (0.185)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 185. NRP-M2 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.211 (0.324)	0.000 (0.157)	0.343 (0.789)	<b>0.763 (&lt;0.001)</b>	0.329 (<0.001)	Eval.
(0.2, 0.8)	0.851 (0.915)	0.400 (0.400)	0.400 (0.346)	<b>1.000 (&lt;0.001)</b>	<b>0.990 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.758 (0.939)	0.272 (0.469)	0.341 (0.203)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.703 (0.626)	0.201 (0.310)	0.201 (0.310)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.745 (0.553)	0.201 (0.329)	0.224 (0.325)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.782 (0.503)	0.310 (0.336)	0.310 (0.266)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.744 (0.505)	0.243 (0.333)	0.241 (0.190)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.725 (0.467)	0.198 (0.296)	0.198 (0.296)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.768 (0.526)	0.215 (0.352)	0.240 (0.341)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.891 (0.604)	0.421 (0.521)	0.421 (0.284)	<b>0.723 (&lt;0.001)</b>	0.261 (<0.001)	Time
(0.2, 0.8)	0.901 (0.596)	0.297 (0.525)	0.372 (0.290)	<b>1.000 (&lt;0.001)</b>	<b>0.990 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.913 (0.522)	0.257 (0.397)	0.257 (0.397)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.732 (0.620)	0.204 (0.316)	0.212 (0.312)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.784 (0.523)	0.215 (0.352)	0.240 (0.341)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.745 (0.503)	0.201 (0.336)	0.244 (0.315)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.742 (0.498)	0.247 (0.339)	0.247 (0.278)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.768 (0.470)	0.215 (0.352)	0.261 (0.294)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.768 (0.523)	0.215 (0.352)	0.240 (0.341)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 186. NRP-M3 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	1.000 (0.000)	0.000 (0.000)	0.000 (0.058)	<b>0.979 (&lt;0.001)</b>	<b>0.964 (&lt;0.001)</b>	Eval.
(0.2, 0.8)	0.899 (0.796)	0.866 (0.866)	0.866 (0.866)	<b>0.989 (&lt;0.001)</b>	<b>0.988 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.498 (0.899)	0.431 (0.681)	0.431 (0.675)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.319 (0.980)	0.307 (0.517)	0.307 (0.517)	<b>0.997 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.747 (0.928)	0.269 (0.453)	0.269 (0.452)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.726 (0.932)	0.430 (0.469)	0.430 (0.459)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.742 (0.932)	0.344 (0.460)	0.334 (0.460)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.721 (0.917)	0.280 (0.427)	0.280 (0.427)	<b>1.000 (&lt;0.001)</b>	<b>0.999 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.730 (0.926)	0.277 (0.467)	0.277 (0.466)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.715 (0.789)	0.492 (0.633)	0.492 (0.631)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.2, 0.8)	0.576 (0.701)	0.381 (0.661)	0.378 (0.653)	<b>0.982 (&lt;0.001)</b>	<b>0.979 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.565 (0.996)	0.307 (0.517)	0.307 (0.517)	<b>0.994 (&lt;0.001)</b>	<b>0.995 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.685 (0.942)	0.301 (0.505)	0.301 (0.505)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.709 (0.928)	0.269 (0.454)	0.269 (0.453)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.748 (0.928)	0.269 (0.483)	0.269 (0.483)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.748 (0.928)	0.351 (0.483)	0.351 (0.483)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.768 (0.926)	0.276 (0.472)	0.276 (0.465)	<b>1.000 (&lt;0.001)</b>	<b>0.999 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.730 (0.926)	0.277 (0.467)	0.277 (0.466)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 187. NRP-M4 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.9)	0.126 (0.129)	0.589 (0.751)	0.579 (0.372)	0.078 (<0.001)	0.029 (<0.001)	Eval.
(0.2, 0.8)	1.000 (1.000)	0.436 (0.379)	0.394 (0.223)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.3, 0.7)	0.665 (1.000)	0.341 (0.226)	0.309 (0.131)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.4, 0.6)	0.910 (0.502)	0.161 (0.201)	0.104 (0.172)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.5, 0.5)	0.892 (0.530)	0.159 (0.190)	0.115 (0.168)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.6, 0.4)	0.944 (0.560)	0.142 (0.137)	0.112 (0.139)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.7, 0.3)	0.942 (0.565)	0.108 (0.114)	0.066 (0.113)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.8, 0.2)	0.893 (0.474)	0.152 (0.178)	0.109 (0.181)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.9, 0.1)	0.866 (0.512)	0.154 (0.220)	0.134 (0.202)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Eval.
(0.1, 0.9)	0.816 (0.840)	0.152 (0.224)	0.135 (0.202)	0.067 (<0.001)	0.024 (<0.001)	Time
(0.2, 0.8)	0.653 (0.787)	0.152 (0.226)	0.127 (0.201)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.3, 0.7)	0.846 (0.501)	0.156 (0.230)	0.133 (0.206)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.4, 0.6)	0.906 (0.490)	0.169 (0.233)	0.140 (0.209)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.5, 0.5)	0.866 (0.512)	0.179 (0.224)	0.136 (0.207)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.6, 0.4)	0.864 (0.520)	0.181 (0.213)	0.133 (0.196)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.7, 0.3)	0.893 (0.529)	0.152 (0.178)	0.109 (0.181)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.8, 0.2)	0.866 (0.507)	0.164 (0.219)	0.135 (0.204)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.9, 0.1)	0.866 (0.512)	0.154 (0.220)	0.134 (0.202)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 188. NRP-E-3o for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	0.308 (0.982)	0.018 (0.027)	0.000 (0.000)	<b>0.735 (&lt;0.001)</b>	<b>0.851 (&lt;0.001)</b>	Eval.
(0.8, 0.1, 0.1)	0.909 (0.751)	0.778 (0.954)	0.686 (0.847)	0.509 (0.830)	<b>0.967 (&lt;0.001)</b>	Eval.
(0.1, 0.1, 0.8)	0.729 (0.952)	0.144 (0.918)	0.049 (0.870)	0.466 (0.410)	0.520 (0.620)	Eval.
(0.33, 0.33, 0.33)	0.570 (0.926)	0.476 (0.937)	0.419 (0.913)	0.166 (<0.001)	<b>0.990 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.757 (0.895)	0.126 (0.965)	0.043 (0.841)	0.576 (0.062)	<b>0.747 (&lt;0.001)</b>	Time
(0.8, 0.1, 0.1)	0.728 (0.895)	0.611 (0.802)	0.538 (0.699)	<b>0.990 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.1, 0.1, 0.8)	0.629 (0.863)	0.094 (0.767)	0.061 (0.675)	<b>0.955 (&lt;0.001)</b>	<b>0.980 (&lt;0.001)</b>	Time
(0.33, 0.33, 0.33)	0.570 (0.892)	0.476 (0.937)	0.419 (0.913)	<b>1.000 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time

Table 189. NRP-G-3o for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	0.540 (0.652)	0.348 (0.447)	0.348 (0.083)	<b>0.659 (&lt;0.001)</b>	<b>0.663 (&lt;0.001)</b>	Eval.
(0.8, 0.1, 0.1)	0.643 (0.820)	0.525 (1.000)	0.445 (0.532)	0.203 (<0.001)	<b>0.920 (&lt;0.001)</b>	Eval.
(0.1, 0.1, 0.8)	0.304 (0.880)	0.130 (1.000)	0.080 (0.522)	0.498 (0.966)	0.430 (0.088)	Eval.
(0.33, 0.33, 0.33)	0.417 (0.703)	0.438 (0.815)	0.289 (0.986)	0.332 (<0.001)	<b>0.899 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.225 (0.781)	0.136 (1.000)	0.040 (0.732)	<b>0.715 (&lt;0.001)</b>	<b>0.753 (&lt;0.001)</b>	Time
(0.8, 0.1, 0.1)	0.475 (0.778)	0.590 (1.000)	0.411 (0.692)	0.004 (<0.001)	0.477 (0.569)	Time
(0.1, 0.1, 0.8)	0.340 (0.756)	0.282 (1.000)	0.042 (0.655)	0.430 (0.089)	0.342 (<0.001)	Time
(0.33, 0.33, 0.33)	0.333 (0.703)	0.438 (0.815)	0.289 (0.986)	0.336 (<0.001)	<b>0.882 (&lt;0.001)</b>	Time



Table 190. NRP-M-30 for **RQ2-3** (the comparisons where Pareto search is better with non-trivial statistical significance are highlighted in bold).

Weight Vector	Median (IQR)			$\hat{A}_{12}$ ( $p$ value)		Budget
	$W_{best}$	NSGA-II	MOEA/D	NSGA-II vs. $W_{best}$	MOEA/D vs. $W_{best}$	
(0.1, 0.8, 0.1)	0.638 (1.000)	0.225 (0.134)	0.000 (0.296)	<b>0.699 (&lt;0.001)</b>	<b>0.728 (&lt;0.001)</b>	Eval.
(0.8, 0.1, 0.1)	0.528 (0.484)	0.550 (0.825)	0.160 (0.528)	0.154 (<0.001)	<b>0.786 (&lt;0.001)</b>	Eval.
(0.1, 0.1, 0.8)	0.681 (0.480)	0.709 (0.823)	0.277 (0.802)	<b>0.663 (&lt;0.001)</b>	<b>0.629 (0.002)</b>	Eval.
(0.33, 0.33, 0.33)	0.611 (0.677)	0.659 (0.733)	0.356 (0.660)	0.424 (0.063)	<b>0.818 (&lt;0.001)</b>	Eval.
(0.1, 0.8, 0.1)	0.605 (0.594)	0.616 (0.767)	0.371 (0.736)	<b>0.627 (0.002)</b>	<b>0.664 (&lt;0.001)</b>	Time
(0.8, 0.1, 0.1)	0.637 (0.669)	0.606 (0.760)	0.267 (0.590)	<b>0.980 (&lt;0.001)</b>	<b>1.000 (&lt;0.001)</b>	Time
(0.1, 0.1, 0.8)	0.586 (0.678)	0.606 (0.758)	0.358 (0.610)	0.411 (0.030)	0.453 (0.248)	Time
(0.33, 0.33, 0.33)	0.693 (0.669)	0.681 (0.757)	0.368 (0.681)	0.404 (0.018)	<b>0.892 (&lt;0.001)</b>	Time