

NRPPProblemsStudy

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1 Tables

Table 1: EP, Mean and Standard Deviation

	NSGAII	SPEA2	MOCeII	MOCHC
NRP1	$1.41e-02$ _{$5.2e-03$}	$1.82e-02$ _{$8.7e-03$}	$7.89e-03$ _{$1.0e-03$}	$9.52e-02$ _{$2.5e-02$}
NRP2	$5.06e-02$ _{$1.5e-02$}	$3.15e-02$ _{$2.1e-02$}	$1.15e-02$ _{$8.1e-03$}	$1.46e-01$ _{$2.6e-02$}
NRP3	$1.14e-01$ _{$1.6e-02$}	$8.86e-02$ _{$3.5e-02$}	$2.83e-02$ _{$2.9e-02$}	$2.16e-01$ _{$2.6e-02$}
NRP4	$2.06e-01$ _{$1.4e-02$}	$1.81e-01$ _{$3.7e-02$}	$6.51e-02$ _{$5.8e-02$}	$2.80e-01$ _{$1.0e-02$}

Table 2: EP. Median and Interquartile Range

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$1.30e-02_{3.4e-03}$	$1.47e-02_{9.3e-03}$	$7.49e-03_{1.7e-03}$	$8.75e-02_{4.6e-02}$
NRP2	$5.11e-02_{1.2e-02}$	$2.18e-02_{2.5e-02}$	$8.64e-03_{2.4e-03}$	$1.50e-01_{3.9e-02}$
NRP3	$1.11e-01_{2.6e-02}$	$7.66e-02_{4.8e-02}$	$1.37e-02_{2.8e-02}$	$2.12e-01_{4.5e-02}$
NRP4	$2.05e-01_{1.5e-02}$	$1.69e-01_{4.0e-02}$	$4.79e-02_{8.3e-02}$	$2.86e-01_{2.0e-02}$

Table 3: SPREAD. Mean and Standard Deviation

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$4.05e-01_{3.3e-02}$	$4.19e-01_{3.9e-02}$	$1.75e-01_{1.6e-02}$	$5.06e-01_{5.0e-02}$
NRP2	$4.47e-01_{3.3e-02}$	$4.46e-01_{6.0e-02}$	$1.56e-01_{4.3e-02}$	$5.78e-01_{4.2e-02}$
NRP3	$5.40e-01_{3.7e-02}$	$4.91e-01_{8.0e-02}$	$1.82e-01_{1.0e-01}$	$6.68e-01_{3.1e-02}$
NRP4	$6.60e-01_{1.9e-02}$	$6.28e-01_{4.3e-02}$	$2.42e-01_{1.3e-01}$	$7.52e-01_{1.6e-02}$

Table 4: SPREAD. Median and Interquartile Range

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$3.97e-01_{4.2e-02}$	$4.12e-01_{4.8e-02}$	$1.69e-01_{1.3e-02}$	$4.84e-01_{6.9e-02}$
NRP2	$4.59e-01_{4.4e-02}$	$4.22e-01_{1.0e-01}$	$1.40e-01_{2.7e-02}$	$5.85e-01_{5.5e-02}$
NRP3	$5.34e-01_{6.0e-02}$	$4.69e-01_{1.0e-01}$	$1.43e-01_{1.2e-01}$	$6.74e-01_{4.6e-02}$
NRP4	$6.56e-01_{3.0e-02}$	$6.13e-01_{6.3e-02}$	$2.18e-01_{2.0e-01}$	$7.53e-01_{2.0e-02}$

Table 5: HV. Mean and Standard Deviation

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$6.75e-01_{1.1e-03}$	$6.74e-01_{1.6e-03}$	$6.77e-01_{2.2e-04}$	$6.55e-01_{1.0e-02}$
NRP2	$6.52e-01_{2.5e-03}$	$6.52e-01_{4.6e-03}$	$6.60e-01_{2.7e-03}$	$6.14e-01_{1.3e-02}$
NRP3	$6.18e-01_{4.7e-03}$	$6.23e-01_{1.4e-02}$	$6.40e-01_{9.3e-03}$	$5.67e-01_{1.5e-02}$
NRP4	$5.51e-01_{4.5e-03}$	$5.80e-01_{2.1e-02}$	$6.06e-01_{2.1e-02}$	$5.09e-01_{7.8e-03}$

Table 6: HV. Median and Interquartile Range

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$6.75e-01_{1.7e-03}$	$6.74e-01_{1.7e-03}$	$6.77e-01_{2.6e-04}$	$6.60e-01_{1.8e-02}$
NRP2	$6.52e-01_{3.4e-03}$	$6.53e-01_{4.2e-03}$	$6.61e-01_{2.3e-03}$	$6.14e-01_{2.2e-02}$
NRP3	$6.18e-01_{8.3e-03}$	$6.28e-01_{1.2e-02}$	$6.44e-01_{6.7e-03}$	$5.68e-01_{2.5e-02}$
NRP4	$5.51e-01_{4.9e-03}$	$5.87e-01_{2.0e-02}$	$6.13e-01_{2.0e-02}$	$5.06e-01_{1.5e-02}$

Table 7: IGD. Mean and Standard Deviation

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$4.56e-04_{1.9e-04}$	$4.61e-04_{2.3e-04}$	$2.37e-04_{6.2e-06}$	$2.75e-03_{9.8e-04}$
NRP2	$7.77e-04_{2.3e-04}$	$5.73e-04_{3.2e-04}$	$2.31e-04_{1.4e-04}$	$3.31e-03_{7.7e-04}$
NRP3	$2.45e-03_{3.2e-04}$	$1.86e-03_{9.8e-04}$	$5.69e-04_{5.5e-04}$	$5.88e-03_{9.3e-04}$
NRP4	$5.27e-03_{3.4e-04}$	$3.87e-03_{1.2e-03}$	$1.28e-03_{1.2e-03}$	$8.42e-03_{3.7e-04}$

Table 8: IGD. Median and Interquartile Range

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$4.11e-04_{1.0e-04}$	$3.75e-04_{1.2e-04}$	$2.36e-04_{5.7e-06}$	$2.38e-03_{1.7e-03}$
NRP2	$7.55e-04_{3.0e-04}$	$4.76e-04_{3.3e-04}$	$1.74e-04_{5.3e-05}$	$3.41e-03_{1.3e-03}$
NRP3	$2.30e-03_{5.0e-04}$	$1.49e-03_{1.0e-03}$	$3.50e-04_{4.9e-04}$	$5.74e-03_{1.2e-03}$
NRP4	$5.36e-03_{3.9e-04}$	$3.54e-03_{1.1e-03}$	$7.54e-04_{1.2e-03}$	$8.49e-03_{6.6e-04}$

Table 9: IGD+. Mean and Standard Deviation

	NSGAII	SPEA2	MOCcell	MOCHC
NRP1	$3.11e-03_{2.6e-04}$	$3.66e-03_{4.7e-04}$	$2.00e-03_{1.2e-04}$	$9.91e-03_{4.8e-03}$
NRP2	$5.60e-03_{5.3e-04}$	$7.26e-03_{1.0e-03}$	$3.15e-03_{1.1e-03}$	$2.15e-02_{6.1e-03}$
NRP3	$1.37e-02_{1.8e-03}$	$1.28e-02_{5.4e-03}$	$6.15e-03_{4.3e-03}$	$3.92e-02_{7.9e-03}$
NRP4	$3.58e-02_{2.2e-03}$	$2.35e-02_{9.9e-03}$	$1.47e-02_{1.0e-02}$	$5.56e-02_{4.6e-03}$

Table 10: IGD+. Median and Interquartile Range

	NSGAII	SPEA2	MOCeII	MOCHC
NRP1	$3.03e-03_{4.9e-04}$	$3.67e-03_{7.9e-04}$	$1.96e-03_{2.0e-04}$	$7.11e-03_{7.4e-03}$
NRP2	$5.54e-03_{1.0e-03}$	$7.33e-03_{9.8e-04}$	$2.65e-03_{1.1e-03}$	$2.13e-02_{1.1e-02}$
NRP3	$1.35e-02_{2.8e-03}$	$1.08e-02_{2.7e-03}$	$4.53e-03_{2.8e-03}$	$3.80e-02_{1.2e-02}$
NRP4	$3.57e-02_{2.5e-03}$	$1.98e-02_{6.3e-03}$	$1.07e-02_{9.7e-03}$	$5.74e-02_{9.0e-03}$