Comparision of ability for test suite obtained by cases with and without MS, tcas

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cost (ms) | | Statement coverage (%) | | #Mutant killed | |
|  | With MS | Without MS | With MS | Without MS | With MS | Without MS |
| IBEA | 156433806 | 155675049 | 53 | 53 | 71 | 71 |
| MOEAD\_PBI | 324769 | 81603722 | 53 | 53 | 71 | 71 |
|  |  | 324641 |  | 53 |  | 34 |
| MOEAD\_TCH | 6748760 | 60244618 | 53 | 53 | 71 | 71 |
| MOEAD\_WS | 5809695 | 55115739 | 53 | 53 | 71 | 71 |
| NSGA-II | 325587 | 324476 | 53 | 53 | 71 | 26 |
|  |  | 215702 |  | 51 |  | 29 |
| SPEA2+SDE | 57638173 | 159810136 | 53 | 53 | 71 | 71 |

Comparision of ability for test suite obtained by cases with and without MS, tot\_info

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cost | | Statement coverage | | Mutant killed | |
|  | With MS | Without MS | With MS | Without MS | With MS | Without MS |
| IBEA | 341927710 | 342406444 | 98 | 98 | 53 | 53 |
| MOEAD\_PBI | 767601 | 833753  708255 | 98 | 98  98 | 53 | 53  47 |
| MOEAD\_TCH | 1275129 | 108278540 | 98 | 98 | 53 | 53 |
| MOEAD\_WS | 1524239 | 76175076 | 98 | 98 | 53 | 53 |
| NSGA-II | 37657260 | 39403886 | 98 | 98 | 53 | 53 |
| SPEA2+SDE | 340951726 | 342215700 | 98 | 98 | 53 | 53 |

Comparision of ability for test suite obtained by cases with and without MS, schedule

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cost | | Statement coverage | | Mutant killed | |
|  | With MS | Without MS | With MS | Without MS | With MS | Without MS |
| IBEA | 492331786 | 493888984 | 131 | 131 | 40 | 40 |
| MOEAD\_PBI | 183180618 | 38153741 | 131 | 131 | 40 | 40 |
| MOEAD\_TCH | 209382648 | 255757298 | 131 | 131 | 40 | 40 |
| MOEAD\_WS | 269850809 | 257320670 | 131 | 131 | 40 | 40 |
| NSGA-II | 64741744 | 60997870 | 131 | 131 | 40 | 40 |
| SPEA2+SDE | 494736865 | 493446036 | 131 | 131 | 40 | 40 |

Comparision of ability for test suite obtained by cases with and without MS, Space

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cost | | Statement coverage | | Mutant killed | |
|  | With MS | Without MS | With MS | Without MS | With MS | Without MS |
| IBEA | 22417725 | 22170395 | 2442 | 2442 | 96 | 96 |
| MOEAD\_PBI | 843048 | 473983 | 2442 | 2442 | 96 | 96 |
| MOEAD\_TCH | 8876426 | 13049387 | 2442 | 2442 | 96 | 96 |
| MOEAD\_WS | 7432841 | 13172203 | 2442 | 2442 | 96 | 96 |
| NSGA-II | 2985892 | 3114083 | 2442 | 2442 | 96 | 96 |
| SPEA2+SDE | 22214670 | 22447460 | 2442 | 2442 | 96 | 96 |

Comparision of ability for test suite obtained by cases with and without MS, gzip\_v3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Cost | | Statement coverage | | Mutant killed | |
|  | With MS | Without MS | With MS | Without MS | With MS | Without MS |
| IBEA | 99866886  103804186  103866567 | 98803181  93833951 | 950  1074  1042 | 558  1060 | 46  47  48 | 29  48 |
| MOEAD\_PBI | 2213204 | 821280  1113703 | 1160 | 1157  1160 | 48 | 29  48 |
| MOEAD\_TCH | 3328185 | 274333478  20839052 | 1160 | 1157  1160 | 48 | 29  48 |
| MOEAD\_WS | 24455  104127603  76842 | 1139911 | 327  897  1160 | 1160 | 38  47  48 | 48 |
| NSGA-II | 2213196 | 1064632  1064479 | 1160 | 1159  1160 | 48 | 29  48 |
| SPEA2+SDE | 95724701  102582354  102367166 | 99665885  90739323 | 975  1050  1048 | 984  1060 | 46  47  48 | 29  48 |