**Table 1. Hard 211 targets of LOMETS2 dataset**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Methods** | **TM-score** | ***p*-value** | **#Correct fold**1 | **Success rate (%)** |
| **DisCovER** | **0.5457** | - | **142** | **67.3** |
| CEthreadera | 0.5071 | 6.98E-06 | 111 | 52.6 |
| EigenThreaderb | 0.4830 |  | 94 | 44.5 |
| map\_alignb |  |  |  |  |
| SparkXa | 0.3620 |  | 42 | 19.9 |
| MUSTERa | 0.3321 |  | 34 | 16.1 |
| CNFpred | 0.3333 |  | 32 | 15.2 |
| PPAS | 0.3124 |  | 29 | 13.7 |
| pGenThreader | 0.3100 |  | 21 | 10.0 |

**Table 2. Hard 160 targets of scope dataset**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | **TM-align<0.4** | |  |  |  | | **TM- align <0.5** | |  |
| TM-score | *p*-value | | #Correct fold | Success rate (%) |  | TM-score | *p*-value | | #Correct fold | Success rate (%) |
| **DisCovER** | **0.409** | **-** | | **35** | **21.9** |  | **0.472** | **-** | | **74** | **46.3** |
| CEthreader | 0.374 | 7.1E-05 | | 12 | 7.5 |  | 0.425 | 2.7E-06 | | 36 | 22.5 |
| EigenThreader | 0.33 |  | | 1 | 0.6 |  | 0.4 |  | | 13 | 8.1 |
| map\_align |  |  | |  |  |  |  |  | |  |  |
|  |  | | **TM- align <0.6** | |  |  |  | | **TM- align <0.7** | |  |
| TM-score | *p*-value | | #Correct fold | Success rate (%) |  | TM-score | *p*-value | | #Correct fold | Success rate (%) |
| **DisCovER** | **0.516** | **-** | | **95** | **59.4** |  | **0.548** | **-** | | **109** | **68.1** |
| CEthreader | 0.478 | 0.0003 | | 70 | 43.8 |  | 0.508 | 5.3E-05 | | 85 | 53.1 |
| EigenThreader | 0.45 |  | | 51 | 31.9 |  | 0.467 |  | | 65 | 40.1 |
| map\_align |  |  | |  |  |  |  |  | |  |  |

**Table 3. 500 targets of MUSTER dataset**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **TM- align <0.5** | | |  |  |  | | **TM- align <0.6** | |  |
| TM-score | *p*-value | #Correct fold | Success rate (%) | |  | TM-score | *p*-value | | #Correct fold | Success rate (%) |
| **DisCovER** | **0.46** | **-** | **209** | | **41.8** |  | **0.52** | **-** | | **308** | **61.6** |
| **DisCovER**ranking | 0.43 |  | 156 | | 31.2 |  | 0.49 |  | | 251 | 50.2 |
| **DisCovER**Pure threading | 0.33 |  | 18 | | 3.6 |  | 0.42 |  | | 208 | 41.6 |