## **DATASET**

|            |      |                 | Random<br>1000x10 | Random<br>1000x100 | Random<br>1000x1000 | Random<br>10000x10 | Random<br>10000x100 | Random<br>10000x1000 | Random<br>100000x10 | Random<br>100000x100 | Random<br>100000x1000 | Random<br>1000000X10 |
|------------|------|-----------------|-------------------|--------------------|---------------------|--------------------|---------------------|----------------------|---------------------|----------------------|-----------------------|----------------------|
| # CLUSTERS | 10   | Sequenziale     | 0.0995483         | 0.638251           | 2.03217             | 10.2006            | 52.0753             | 134.221              | 162.108             | 2622.35              | 14810.8               | 3873.36              |
|            |      | Open-MP         | 0.0426349         | 0.173283           | 0.547636            | 3.46449            | 14.405              | 38.6007              | 55.2159             | 710.503              | 4081.3                | 1320.14              |
|            |      | Speedup Open-MP | 2.33              | 3.68               | 3.71                | 2.94               | 3.62                | 3.48                 | 2.94                | 3.69                 | 3.63                  | 2.93                 |
|            |      | CUDA            | 0.00684048        | 0.0262636          | 0.0918535           | 0.823457           | 0.988186            | 2.76661              | 24.9337             | 45.3077              | 289.722               | 584.845              |
|            |      | Speedup CUDA    | 14.55             | 24.30              | 22.12               | 12.39              | 52.70               | 48.51                | 6.50                | 57.88                | 51.12                 | 6.62                 |
|            |      | # ITERAZIONI    | 22                | 16                 | 5                   | 228                | 130                 | 33                   | 363                 | 639                  | 366                   | 861                  |
|            | 100  | Sequenziale     | 0.390759          | 2.33382            | 7.84521             | 29.5799            | 150.701             | 705.307              | 940.892             | -                    | -                     | -                    |
|            |      | Open-MP         | 0.102776          | 0.595576           | 1.99878             | 7.78527            | 38.7765             | 180.048              | 248.872             | -                    | -                     | -                    |
|            |      | Speedup Open-MP | 3.80              | 3.92               | 3.92                | 3.80               | 3.89                | 3.92                 | 3.78                |                      |                       |                      |
|            |      | CUDA            | 0.00773597        | 0.0408883          | 0.13143             | 0.489796           | 2.22139             | 10.0715              | 14.3992             | -                    | -                     | -                    |
|            |      | Speedup CUDA    | 50.51             | 57.08              | 59.69               | 60.39              | 67.84               | 70.03                | 65.34               |                      |                       |                      |
|            |      | # ITERAZIONI    | 10                | 6                  | 2                   | 76                 | 39                  | 18                   | 242                 | -                    | -                     | -                    |
|            | 1000 | Sequenziale     | 0.786591          | 7.8893             | 78.2989             | 65.8951            | 733.294             | 1555.92              | 3840.99             | -                    | -                     | -                    |
|            |      | Open-MP         | 0.198559          | 1.98681            | 19.8394             | 16.776             | 189.338             | 401.735              | 995.712             | -                    | -                     | -                    |
|            |      | Speedup Open-MP | 3.96              | 3.97               | 3.95                | 3.93               | 3.87                | 3.87                 | 3.86                |                      |                       |                      |
|            |      | CUDA            | 0.0147833         | 0.134762           | 1.15328             | 1.00158            | 10.5292             | 21.8604              | 57.8113             | -                    | -                     | -                    |
|            |      | Speedup CUDA    | 53.21             | 58.54              | 67.89               | 65.79              | 69.64               | 71.18                | 66.44               |                      |                       |                      |
|            |      | # ITERAZIONI    | 2                 | 2                  | 2                   | 17                 | 19                  | 4                    | 99                  | -                    | -                     | -                    |