Table 5: Institutions Collaboration Networks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Node** | **Cluster** | **Betweenness** | **Closeness** | **PageRank** |  |
| national university of singapore | 1 | 91.7238 | 0.0069 | 0.04302 |  |
| nanyang technological university | 1 | 0 | 0.00588 | 0.01461 |  |
| shanghai jiao tong university | 2 | 0 | 0.00629 | 0.01545 |  |
| zhejiang university | 2 | 50.3483 | 0.00725 | 0.04838 |  |
| beihang university | 2 | 0 | 0.00613 | 0.01095 |  |
| university of California | 3 | 153.865 | 0.00758 | 0.15613 |  |
| harvard university | 3 | 24.7061 | 0.00719 | 0.09291 |  |
| university of pennsylvania | 3 | 0 | 0.00637 | 0.00968 |  |
| university of Michigan | 3 | 0 | 0.00645 | 0.01363 |  |
| johns hopkins university | 3 | 0 | 0.00641 | 0.02469 |  |
| university of southern california | 3 | 0 | 0.00637 | 0.00968 |  |
| massachusetts institute of technology | 3 | 0 | 0.00649 | 0.02863 |  |
| university of washington | 3 | 0 | 0.00671 | 0.02787 |  |
| university of toronto | 3 | 12.1296 | 0.00699 | 0.04273 |  |
| stanford university | 3 | 1.50044 | 0.00685 | 0.03614 |  |
| pennsylvania state university | 3 | 0 | 0.00637 | 0.00968 |  |
| cornell university | 3 | 0 | 0.00649 | 0.02002 |  |
| tsinghua university | 4 | 34.3056 | 0.00714 | 0.04059 |  |
| university of florida | 4 | 14.8776 | 0.00704 | 0.04504 |  |
| peking university | 4 | 0.18571 | 0.00629 | 0.01467 |  |
| imperial college london | 5 | 4.51594 | 0.0069 | 0.03503 |  |
| university college london | 5 | 1.404 | 0.00662 | 0.04638 |  |
| university of oxford | 5 | 1.19615 | 0.0068 | 0.0358 |  |
| university of cambridge | 5 | 52.2418 | 0.0073 | 0.06542 |  |
| carnegie mellon university | 6 | 0 | 0.00115 | 0.00546 |  |
| university of chinese academy of sciences | 7 | 0 | 0.00467 | 0.03467 |  |
| university of technology sydney | 8 | 48 | 0.00602 | 0.01886 |  |
| institute of automation | 9 | 25 | 0.00529 | 0.04295 |  |
| northeastern university | 10 | 0 | 0.00115 | 0.00546 |  |
| rwth aachen university | 11 | 0 | 0.00115 | 0.00546 |  |