# Supplementary materials

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Keyword | nKK Rank | nWKryx Rank | nWKryx Input Degree | nKK Degree | Keyword | nKK Rank | nWKryx Rank | nWKryx Input Degree | nKK Degree |
| network | 1 | 1 | 171 | 1146 | peer | 35 | 34 | 11 | 174 |
| social | 2 | 2 | 78 | 757 | distance | 36 | 34 | 11 | 171 |
| model | 3 | 3 | 65 | 597 | homophily | 37 | 30 | 12 | 168 |
| dynamics | 4 | 4 | 42 | 466 | orient | 38 | 34 | 11 | 158 |
| structure | 5 | 6 | 33 | 385 | method | 39 | 39 | 10 | 157 |
| graph | 5 | 5 | 39 | 385 | individual | 40 | 64 | 7 | 148 |
| analysis | 7 | 8 | 27 | 322 | risk | 41 | 55 | 8 | 146 |
| community | 8 | 7 | 28 | 319 | core | 42 | 39 | 10 | 143 |
| datum | 9 | 9 | 23 | 299 | online | 43 | 46 | 9 | 139 |
| time | 10 | 15 | 18 | 271 | performance | 44 | 55 | 8 | 138 |
| behavior | 11 | 11 | 21 | 269 | structural | 44 | 55 | 8 | 138 |
| support | 12 | 20 | 15 | 266 | temporal | 46 | 34 | 11 | 136 |
| influence | 13 | 13 | 19 | 243 | detection | 47 | 30 | 12 | 134 |
| friendship | 14 | 15 | 18 | 238 | trade | 47 | 39 | 10 | 134 |
| evolution | 15 | 12 | 20 | 234 | organizational | 49 | 79 | 6 | 133 |
| stochastic | 16 | 19 | 17 | 231 | adolescent | 50 | 46 | 9 | 132 |
| centrality | 17 | 9 | 23 | 225 | personal | 51 | 55 | 8 | 130 |
| random | 17 | 15 | 18 | 225 | perception | 51 | 64 | 7 | 130 |
| complex | 19 | 15 | 18 | 219 | communication | 53 | 46 | 9 | 129 |
| tie | 20 | 24 | 13 | 217 | activity | 53 | 79 | 6 | 129 |
| health | 20 | 24 | 13 | 217 | inference | 55 | 55 | 8 | 128 |
| selection | 22 | 20 | 15 | 215 | egocentric | 56 | 55 | 8 | 127 |
| space | 23 | 30 | 12 | 209 | measure | 57 | 22 | 14 | 125 |
| dynamic | 24 | 22 | 14 | 207 | diffusion | 58 | 46 | 9 | 124 |
| cluster | 25 | 13 | 19 | 200 | science | 59 | 46 | 9 | 123 |
| organization | 26 | 30 | 12 | 199 | contagion | 59 | 46 | 9 | 123 |
| base | 27 | 24 | 13 | 198 | **topology** | 62 | 55 | 8 | 120 |
| information | 28 | 24 | 13 | 188 | **pattern** | 63 | 46 | 9 | 119 |
| actor | 29 | 24 | 13 | 187 | **distribution** | 68 | 39 | 10 | 113 |
| longitudinal | 29 | 46 | 9 | 187 | **world** | 71 | 55 | 8 | 111 |
| use | 31 | 39 | 10 | 185 | **epidemic** | 74 | 46 | 9 | 110 |
| power | 32 | 24 | 13 | 180 | **matrix** | 77 | 39 | 10 | 108 |
| size | 33 | 34 | 11 | 178 | **blockmodel** | 87 | 55 | 8 | 100 |
| modeling | 34 | 39 | 10 | 175 |   |   |   |   |   |

**Table 1S. nKK and nWKryx net degree: the most used keywords**

***Note:*** Underlined are present in a relatively small number of articles, but are connected to a large number of other keywords (used in wider context). **Bolded** are present in a relatively large number of articles (used in narrow contexts).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Island Words** | **Total size of island** | **Number of articles in island** | **Author** | **Title** | **Year** | **Times cited in WoS** |
| epidemic, global, infection, tree | 4 | 13 | Genois, M | Data on face-to-face contacts in an office building suggest a low-cost vaccination strategy based on community linkers | 2015 | 60 |
| epidemic, global, infection, tree | 4 | 13 | Schneider, J | Network dynamics of HIV risk and prevention in a population-based cohort of young Black men who have sex with men | 2017 | 29 |
| epidemic, global, infection, tree | 4 | 13 | Potter, GE | Modeling workplace contact networks: The effects of organizational structure, architecture, and reporting errors on epidemic predictions | 2015 | 14 |
| epidemic, global, infection, tree | 4 | 13 | Piontti, APY | The infection tree of global epidemics | 2014 | 9 |
| epidemic, global, infection, tree | 4 | 13 | Galeotti, A | Diffusion and protection across a random graph | 2015 | 5 |
| epidemic, global, infection, tree | 4 | 13 | Moody, J | Epidemic potential by sexual activity distributions | 2017 | 3 |
| epidemic, global, infection, tree | 4 | 13 | Spricer, K | An SIR epidemic on a weighted network | 2019 | 2 |
| epidemic, global, infection, tree | 4 | 13 | Armbruster, B | Forward reachable sets: Analytically derived properties of connected components for dynamic networks | 2017 | 2 |
| epidemic, global, infection, tree | 4 | 13 | Marcum, CS | Growing-up and coming-out: Are 4-cycles present in adult hetero/gay hook-ups? | 2016 | 2 |
| epidemic, global, infection, tree | 4 | 13 | Harling, G | Impact of degree truncation on the spread of a contagious process on networks | 2018 | 1 |
| epidemic, global, infection, tree | 4 | 13 | Leduc, MV | Strategic investment in protection in networked systems | 2017 | 1 |
| epidemic, global, infection, tree | 4 | 13 | Zhu, Z | The similarity of global value chains: A network-based measure | 2018 | 0 |
| epidemic, global, infection, tree | 4 | 13 | Chu, KH | Coding communications across time: Documenting changes in interaction patterns across adopter categories | 2017 | 0 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Koskinen, J | Simultaneous modeling of initial conditions and time heterogeneity in dynamic networks: An application to Foreign Direct Investments | 2015 | 14 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Goyal, R | Sampling networks from their posterior predictive distribution | 2014 | 11 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Fisher, JC | END NOTE Stickiness of respondent-driven sampling recruitment chains | 2014 | 5 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Lerner, J | Reliability of relational event model estimates under sampling: How to fit a relational event model to 360 million dyadic events | 2020 | 1 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Ryan, C | Bayesian model selection for the latent position cluster model for social networks | 2017 | 1 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Hubschle-Schneider, L | Linear work generation of R-MAT graphs | 2020 | 0 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Marin, A | Noting the ties after tying the knot: Photo-based elicitation of retrospective personal network data | 2020 | 0 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Zhu, Z | The similarity of global value chains: A network-based measure | 2018 | 0 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Sewell, DK | Simultaneous and temporal autoregressive network models | 2018 | 0 |
| generation, sampling, note, chain, drive, respondent, recruitment, end, stickiness | 9 | 10 | Hollanders, R | Data-driven traffic and diffusion modeling in peer-to-peer networks: A real case study | 2014 | 0 |

**Table 2S. Islands: partition into 3 clusters (2 small islands)**

|  |  |
| --- | --- |
| **Age** |  **Probability of excess zeros** |
| 1 | 0.469 |
| 2 | 0.204 |
| 3 | 0.069 |
| 4 | 0.021 |
| 5 | 0.006 |
| 6 | 0.002 |
| 7 | 0.001 |

**Table 3S. Probability of excess zero citations due to article age (from zero-inflated negative binomial post-estimation analysis)**