Summer Institute 2020 - Reading List

The most critical items are in red and starred.

ORA

****Kathleen M. Carley, 2014, ORA: A Toolkit for Dynamic Network Analysis and Visualization, In Reda Alhajj and Jon Rokne (Eds.) Encyclopedia of Social Network Analysis and Mining, Springer.**

Altman, Neal & Carley, Kathleen M & Reminga, Jeffrey. (2019). ORA User's Guide 2019. *Carnegie Mellon University School of Computer Science, Institute for Software Research, Technical Report CMU-ISR-19-100*

AutoMap

****Kathleen M. Carley, Dave Columbus and Peter Landwehr, 2013, "AutoMap User's Guide 2013," Carnegie Mellon University, School of Computer Science, Institute for Software Research, Technical Report, CMU-ISR-13-105.**

Kathleen M. Carley, Michael W. Bigrigg, Boubacar Diallo, 2012, "Data-to-Model: A Mixed Initiative Approach for Rapid Ethnographic Assessment," Computational and Mathematical Organization Theory, 18(3): 300-27. DOI: 10.1007/s10588-012-9125-y

Kathleen M. Carley and Dave Columbus, 2012, "Basic Lessons in ORA and AutoMap 2012," Carnegie Mellon University, School of Computer Science, Institute for Software Research, Technical Report, CMU-ISR-12-107.

Construct

****Kathleen M. Carley, and Michael K. Martin and Brian R. Hirshman, 2009, "The Etiology of Social Change," Institute for Software Research

****Kathleen M. Carley, 1990, "Group Stability: A Socio-Cognitive Approach," Advances in Group Processes: Theory and Research. Edited by Lawler E., Markovsky B., Ridgeway C. and Walker H. (Eds.), Vol. VII. Greenwhich, CN: JAI Press, 7: 1-44.

Kathleen M. Carley, 1991, "A Theory of Group Stability," American Sociological Review, 56.3: 331-354. Available from: http://www.jstor.org/stable/2096108. Reprinted in Organizational Networks Research, 2011, Martin Kilduff Diageo & Andrew V. Shipilov (Eds), Sage.

Kathleen M. Carley, Michael J. Lanham, Kenneth Joseph, Michael Kowalchuck, and Geoffrey P. Morgan, 2014, "Construct User's Guide", School of Computer Science, Institute for Software Research, Technical Report CMU-ISR-14-105R.

Michael J. Lanham, Kenneth Joseph, Geoffrey P. Morgan, and Kathleen M. Carley, 2014, "Construct — Developing and Building CASOS' Simulation Development Environments", School of Computer Science, Institute for Software Research, Technical Report CMU-ISR-14-115.

Brian R. Hirshman, Michael K. Martin and Kathleen M. Carley, 2008, "Modeling Information Access in Construct," Institute for Software Research, Technical Report, CMU-CS-08-115.

Brian R. Hirshman, Kathleen M. Carley and Michael J. Kowalchuck, 2007, "Loading Networks in Construct," Carnegie Mellon University, School of Computer Science, Institute for Software Research, Technical Report, CMU- ISRI-07-116.

Brian R. Hirshman, Kathleen M. Carley and Michael J. Kowalchuck, 2007, "Specifying Agents in Construct," Carnegie Mellon University, School of Computer Science, Institute for Software Research, Technical Report, CMU- ISRI-07-107.

Agent-Based Dynamic-Network Simulation

****Kathleen M. Carley, (1999), "On Generating Hypotheses Using Computer Simulations," Systems Engineering, 2, 69-77.

Marcus A. Louie and Kathleen M. Carley, 2008, "Balancing the Criticisms: Validating Multi-Agent Models of Social Systems," in a special issue on "Simulating Organizational Processes" in Simulation Modeling Practice and Theory, 16 (2). Pp. 242-256.

Kathleen M. Carley, 2019, "Social-Behavioral Simulation: Key Challenges." In Paul K. Davis, Angela O'Mahoney, Jonathan Pfautz (Eds.) Social-Behavioral Modeling for Complex Systems, Wiley, Hoboken, NJ, pp. 741-752.

General Network Science

Kathleen M. Carley, Guido Cervone, Nitin Agarwal, and Huan Liu, 2018, "Social Cyber-Security", In Proceedings of the International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson (Eds.) July 10-13, 2018 Washington, DC, Springer.

Geoffrey Morgan and Kathleen M. Carley, 2017, "Socio-cultural Cognitive Modeling," In Proceedings of the International Conference SBP-BRiMS 2017, Yu Ru Lin, and Robert Thomson (Eds.) July 5-8, 2017 Washington, DC, Springer.

David Dekker, David Krackhardt, Tom A. B. Snijders, 2003, "Multicollinearity Robust QAP for Multiple-Regression," NAACSOS Conference 2003

George B. Davis and Kathleen M. Carley, 2008, "Clearing the FOG: Fuzzy, overlapping groups for social networks," Social Networks, 30 (3) 201- 212.

Terrill L. Frantz, Marcelo Cataldo and Kathleen M. Carley, 2009, "Robustness of centrality measures under uncertainty: Examining the role of network topology," Computational and Mathematical Organization Theory, 15.4:303-328.

David M. Beskow and Kathleen M. Carley, 2019, Social Cybersecurity: An Emerging National Security Requirement, Military Review, March-April2019 – see https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/Mar-Apr-2019/117-Cybersecurity/b

Meta-Networks

****Kathleen M. Carley, (2002), "Smart Agents and Organizations of the Future," 206-220. Thousand Oaks, CA: Sage.

Illustrative Case Studies

Joshua Uyheng and Kathleen M. Carley, 2019, "Characterizing Bot Networks on Twitter: An Empirical Analysis of Contentious Issues in the Asia-Pacific," In Proceedings of the International Conference SBP-BRiMS 2019, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson (Eds.) July 9-12, 2019 Washington DC, Springer.

Matthew Benigni, Kenneth Joseph, and Kathleen M. Carley, 2019, Bot-ivistm: Assessing Information Manipulation in Social Media Using Network Analytics, In Emerging Research Challenges and Opportunities in Social Network Analysis and Mining. Agarwal, Nitin & Dokoohaki, Nima (Eds.), Springer. DOI: 10.1007/978-3-319-94105-9_2

Binxuan Huang and Kathleen M. Carley, 2018, "Location Order Recovery in Trails with Low Temporal Resolution," *IEEE Transactions on Network Science and Engineering*. DOI: 10.1109/TNSE.2018.2871783

Binxuan Huang, Yanglan Ou and Kathleen M. Carley, 2018, "Sentiment Classification with Attention-over-Attention Neural Networks," In Proceedings of the International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson (Eds.) July 10-13, 2018 Washington DC, Springer.

David M. Beskow and Kathleen M. Carley, 2018, "Using Random String Classification to Filter and Annotate Automated Accounts," In Proceedings of the International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson (Eds.) July 10-13, 2018 Washington DC, Springer. Best Student Paper

Matthew Babcock, David Beskow, Kathleen M. Carley, 2018, "Beaten Up on Twitter? Exploring Fake News and Satirical Responses during the Black Panther Movie Event", In Proceedings of the International Conference SBP-BRiMS 2018, Halil Bisgin, Ayaz Hyder, Chris Dancy, and Robert Thomson (Eds.) July 10-13, 2018 Washington, DC, Springer.

Matthew Benigni, Kenneth Joseph, and Kathleen M. Carley, 2017, "Online Extremism and the Communities that Sustain It: Detecting the ISIS Supporting Community on Twitter", PLOS ONE.

William Frankenstein, Ghita Mezzour, Kathleen M. Carley, L. Richard Carley, 2015, "Remote assessment of countries' nuclear, biological, and cyber capabilities: joint motivation and latent capability approach," Social Network Analysis and Mining,5(1):1- 21. DOI: 10.1007/s13278-014-0243-z

Jacqueline A. Merrill, Kathleen M. Carley, Mark G. Orr, Christie Y. Jeon and Jonathon Storrick, 2012, "Patterns of Interaction Among Local Public Health Officials and the Adoption of Recommended Practices," Frontiers in Public Health Services and Systems Research, 1:1, Article 6. Available from: http://uknowledge.uky.edu/frontiersinphssr/vol1/iss1/6