

Kate Coronges

Network Science Institute | Northeastern University
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EDUCATION

Ph.D.	Health Behavior Research, University of Southern California	Jun 2009
M.P.H.	Biostatistics & Epidemiology, University of Southern California	May 2005
B.A.	Molecular, Cellular & Developmental Biology, UC Santa Cruz	Dec 1999

PROFESSIONAL POSITIONS

Executive Director, April 2015 - present
Network Science Institute
Northeastern University, Boston, MA

Strategic leader with over 10 years in higher education research, specializing in creating and advancing research and educational agendas and managing interdisciplinary scientific programs.

- Provide strategic leadership for research and training programs, collaborate with director and institute members to develop vision, goals, design new initiatives, implement and fiscal planning of new activities.
- Oversee all functional areas of the institute - including budget management, HR, including fiscal, personnel management, academic programs, communications, outreach planning, and sponsor & partner relations.
- Design and implement processes to enhance operational effectiveness to support students and faculty, while ensuring compliance with university standards.
- Develop and manage annual budgets for institute operations; create funding initiatives to support innovative research, track research funding and revenue for institute members.
- Collaborate with university leadership to expand the institute across campuses, and lead initiatives to support this growth. Led efforts to expand institute in London, UK and Portland ME, including hiring, operational protocols, and coordination of research & education activities.
- Lead grant and fund-raising efforts, for center or institute wide initiatives, and identify funding opportunities and establish research collaborations aligned with institutional goals with priorities.
- Enhance institute's visibility within the scientific community through strategic initiatives – oversee communication and branding campaigns, including media coverage, newsletters, website content, and executive reporting.

Program Manager, April 2013 - April 2015
Network Science Division, Information Science Directorate
Army Research Office, Research Triangle Park, NC

- Designed two portfolios of high risk, high impact research to support US Army's basic science investments in network science.
- Manage all technical, procurement, and financial aspects of Social Networks and Social Informatics programs totaling \$3-4M annually.

- Organized regular technical strategy meetings to communicate vision and technical innovations to academics, government and military leadership.
- Developed new research opportunities across DoD agencies, and between government and University researchers.
- Obtained \$6M for Multidisciplinary University Research Initiative (MURI) program in ‘*Network Science of Teams*’; highly competitive, selected by OSD.

Assistant Professor & Research Fellow, Jul 2009 - April 2013

Department of Behavioral Sciences & Leadership, Sociology program

Network Science Center, United States Military Academy

- Designed and taught two new courses in Social Networks (SN) and SN for Public Policy; advised over a dozen thesis projects.
- Developed curriculum and created a new academic minor in Network Science.
- Played key role in fostering intellectual community to address military issues using network analytic perspectives, including recruiting and hiring faculty; PI on grant to support research fellows (Minerva Initiative), led author for \$1M Center grant to support operations (via ARO); and selected graduate programs for officers.
- Developed research focused on leadership and cadet network structures; Collected field data, received grants, IRB approval and West Point support to investigate the role of social and organizational relationships in leadership, influence, and communication among cadets.

Managing Editor, June 2009 - June 2014

Assistant Editor, Jan 2005 - June 2009

CONNECTIONS

Journal of the International Network of Social Network Analysis (INSNA)

- Managed all aspects of publishing the peer reviewed research journal handling 25-30 manuscripts per year for a biannual publication.
- Supervised all decisions on design, layout and printing of journal.
- Initiated new manuscript evaluation and management procedures; tracked all submissions, appointed appropriate reviewers; maintain communication with authors.

Refereed Publications

1. Fox, E.W., Short, M.B., Schoenberg, F.P., Coronges, K. and Bertozzi, A. L. (2016). **Modeling E-mail Networks and Inferring Leadership Using Self-Exciting Point Processes**, *Journal of the American Statistical Association*, 111, S14: 1-21.
2. Richmond, A., Arney, D.C., Coronges, K., Simonson, M. (2016). **The Role of network science in analyzing slums in rapidly growing urban areas**. *Small Worlds Journal*, August 16, 2016.
3. Zipkin, J.R., Schoenberg, F.P., Coronges, K. and Bertozzi, A.L. (2016). **“Point-Process Models of Social Network Interactions: Parameter Estimation and Missing Data Recovery,”** accepted in *Eur. Journal of Applied Mathematics*. 27(3) pp.502-529.
4. Arney, C., and Coronges, K. (2015). **Categorical Framework for Complex Organizational Networks: Understanding the Effects of Types, Size, Layers, Dynamics and Dimensions**. In G. Mangioni, F. Simini, S. M. Uzzo, & D. Wang (Eds.), *Complex Networks VI: Proceedings of the 6th Workshop on Complex Networks CompleNet 2015* (pp. 191-200). New York, NY: Springer.
5. Coronges, K. Tyshchuk, Y., and Wallace, W. (2014). **Preparing leaders at the U.S. Military Academy: A Socio-structural view**. Conference: The 2014 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining at: Beijing, China.

6. Coronges, K, Tyshchuk, and Wallace, W. (2014) **Leadership: Do networks matter?** *Proceedings of the 2014 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM)*, August 2014.
7. Coronges, K, Miller, K., Tamayo, C. and Ender, M. (2013). **A Network evaluation of attitudes toward gays among U.S. Military cadets**, *Journal of Homosexuality*, Volume 60 (11): 1557-1580.
8. Arney, C., Hutchinson, K., Coronges, K. and Fletcher, H. (2013). **Using rare event modeling to build scenarios and forecast the future**. *Proceedings of the Network Science 2013 IEEE 2nd*, pp 31-36.
9. Dodge, R., Coronges, K., & Rovira, E. (2012). **Empirical benefits of training to phishing susceptibility**, *Proceedings of the 27th IFIP SEC International Information Security and Privacy Conference*, June 2012.
10. Coronges, K., Dodge R., Mukina, C., Rovira E, Radwick Z, and Shevchik J., **Influences of social networks on phishing vulnerability**, 2012 In *Proceedings of the 45th Hawaii International Conference on System Sciences*, pp 2366-2773, 4-7 January 2012.
11. Coronges, K, Szablowski, E., and Arney, C. (2012). **Generation 2.0: Social media and the future of the Army**. *MORS Phalanx: The Bulletin of Military Operations Research*, 45(1): 27-29.
12. Ringler, K. Arney, C. and Coronges, K. (2012). **U.S. Military Academy's Minerva research initiative: Why is understanding culture important for the military?** *MORS Phalanx: The Bulletin of Military Operations Research*, 45(3): 29-32.
13. Coronges, K., Valente, T.W., and Stacy, A.W. (2011). **Social network influences of alcohol and marijuana cognitive associations**. *Addictive Behaviors*, 36 (12): 1305-1308.
14. Valente, T. W., Coronges, K., Stevens, G.D., and Cousineau, M.R. (2008). **Collaboration & competition in a children's health initiative coalition: A Network analysis**. *Evaluation and Program Planning*, 31: 392-402.
15. Valente, T. W., Coronges, K., Lakon, C., and Costenbader, E. (2008). **How correlated are network centrality measures**. *Connections*, 28(1): 16-26.
16. Coronges, K., Valente, T. W. and Stacy, A. W. (2007). **Structural comparison of word associations in two populations using network analysis**. *Journal of Applied Social Psychology*, 37(9): 2097-2129.
17. Ames, S. L., Franken, I. A., and Coronges, K. (2005). **Implicit cognition and other drugs of abuse**. *Handbook of Implicit Cognition and Addiction*. R. W. Wiers & A. W. Stacy (Eds.), SAGE, Beverly Hills, CA. pp 363-378.
18. Goran, M. I., Coronges, K., Bergman, R. N., Cruz, M. L., and Gower, B. A. (2003). **Influence of family history of Type 2 Diabetes on insulin resistance in pre-pubertal children**. *Journal of Clinical Endocrinology & Metabolism*, 88(1): 192-5.

Other Publications

1. Panagakou, E., Giannini, M., Lazer, D., Vespignani, A., & Coronges, K. (2018). **Evaluation of the First US PhD Program in Network Science: Developing Twenty-First-Century Thinkers to Meet the Challenges of a Globalized Society**. In *Network Science Education* (pp. 71-85). Springer, Cham.
2. Coronges, K. Barabasi, A.L., & Vespignani, A. (2017). **Future directions of network science: A Workshop report on the emerging science of networks**. ASD-R&E
3. Panagakou E., Tyshcuk Y., Nattiel C., Dalisay D. S., Coronges K. **Modeling Refugee Immigration Policies, Mathematical Modeling for the MCM/ICM Contests**, Vol. 3. Beijing: Higher Education Press | 2017
4. Arney, D.C. and Coronges, K. (2015) **On Jargon: Policy Modeling**, *UMAP Journal*, pp. 189-194.

5. Arney, C. Bell, J. Coronges, K. & Merkyl, G. (2014). **Simulating and analyzing dark networks: Modeling and measuring using network tools** (*Volume of Dark Networks, Cambridge Press*).
6. Arney, C. Coronges, K & Pulleyblank, W. (2013). **Integrating information sciences**. MORS Phalanx: The Bulletin of Military Operations Research, 46(4): 29-35
7. Ringler, K. Arney, C. and Coronges, K. (2012). **U.S. Military Academy's Minerva research initiative: Why is understanding culture important for the military?** MORS Phalanx: The Bulletin of Military Operations Research, 45(3): 29-32.
8. Arney, C. and Coronges, K.(2012). **Commentary: Modeling for Crime Busting**. The Journal of Undergraduate Mathematics and its Applications, 33 (3): 293-304.
9. Coronges, K, Szablowski, E., and Arney, C. (2012). **Generation 2.0: Social media and the future of the Army**. MORS Phalanx: The Bulletin of Military Operations Research, 45(1): 27-29.
10. McCulloh, I., Coronges, K., and Graham, J. (2010). **Friendship formation in military organizations**. U.S. Army Research Institute for the Behavioral and Social Sciences Report, Arlington, Virginia.
11. Ames, S. L., Franken, I. A., and Coronges, K. (2005). **Implicit cognition and other drugs of abuse**. Handbook of Implicit Cognition and Addiction. R. W. Wiers & A. W. Stacy (Eds.), SAGE, Beverly Hills, CA. pp 363-378.

Invited Speaking Events

- 2021, July. Panel speaker, “**A Career in Computational Social Science – Dream or Disillusion**” session, International Conference on Computational Social Science, ETH Zurich, Switzerland.
- 2015, June. Panel speaker, ‘**Interdisciplinary science**’ session, International Conference on Computational Social Science, Helsinki, Finland.
- 2015, March. **Unstructured leaders in structured organizational environments**. Invited speaker for 6th International Conference for Complex Networks, CompleNet, NY Hall of Science, Queens, NY.
- 2015, Jan. **Network Science of Teams**. Invited speaker for the upcoming NetSciX, Rio de Janeiro, Brazil.
- 2013, April. **Interdisciplinary network science**. Invited panel speaker for the IEEE Network Science Workshop, West Point, NY.
- 2012, April. **Army-relevant network science at USMA: Interdisciplinary research, outreach, teaching and learning**. Invited to present at the Network Science Conference, West Point, NY.
- 2010, February. **Generation 2.0: Social media and the future for Army officers**. Invited to present at the Mission Command Workshop, RDECOM (co-hosted by the C4ISR SID and Network TFT, Adelphi Laboratory Center), Adelphi, MD.
- 2009, November. **Social network influences on cognitions & behaviors**. Invited speaker at the Longitudinal Network Analysis Symposium, Oxford University, England.
- 2006, January. **Cognitive associative networks**. Invited speaker at the ‘Age of Simulation conference’, AEC Ars Electronica Linz Museum in Linz, Austria.

Teaching

- *Instructor & Assistant Course Director, Senior Honors Thesis, Dept of Mathematical Sciences, USMA, Fall 2014 & Spring 2015.*
- *Instructor & Course Director, Social Network Analysis for Public Policy, Dept Behavioral Science & Leadership, USMA, Spring 2012 & Spring 2013.*
- *Instructor & Course Director, Social Network Analysis, Dept of Behavioral Science and Leadership, USMA, Spring 2010 & Spring 2011.*

- *Instructor, Social Inequality, Dept of Behavioral Science & Leadership, USMA, Fall 2009.*

Grant Awards

- Co-PI, **MultiNet: Accelerating discovery in multilevel network science**, National Science Foundation (NSF), AccelNet Collaborative Research program, \$2M (Northeastern University portion: \$964,662), 2020-2025
- Co-PI, **Interdependent Network-Based Quantification of Infrastructure Resilience (INQUIRE)**, National Science Foundation, CRISP program, \$2.5M (individual grant portion, \$180,000), 2017-2022
- PI, **Advancing Human-based Modeling with Large-Scale High Performance Computing**. Office of Naval Research (ONR) – DURIP program, *Institutional award to support massive expansion of high-performance computing infrastructure*, \$918,133, 2017-2019
- PI, **Consortium for the Society of Young Network Scientists (SYNS)**, Army Research Office, *Conference award to support the formation of two workshops for early career network scientists*, \$36,500, 2017-2018
- PI, **Minerva Challenge: Teaching Undergraduates Social Policy Modeling and Inquiry**, Minerva - Office of Secretary of Defense, \$8,000, 2014
- Co-PI, **New framework for modeling social data**, Army Research Office (ARO), *To support thesis projects and mentorship of West Point cadets*, \$50,000, 2011
- Senior Personnel, **Biometrics user authentication**, DARPA, *Project to explore social network effects of phishing attacks made on targeted populations, US Army cadets*, \$200k, Individual grant portion: \$20,000, 2011
- PI, **Muslim radicalization through the lens of social and cultural network evolution**, Minerva, *Institutional award to support initiative in extreme radicalization for a faculty hire, annual conferences and expansion of academic programs*, \$750,000, 2011-2013
- PI, **Social Network structures and leadership formation in military organizations**, Army Research Institute, \$300,000 2010-2012
- PI, **US Military cadet communications and leadership network dynamics**, US Military Academy | Army Research Offices, *Project to explore social influence in formal and informal leadership positions*, \$250,000, 2010-2013
- Recipient, Dissertation Completion Fellowship Award, University of Southern California, 2007
- Training grant recipient, NIH-NIDA, Doctoral training support, 2002-2007

Service

- **NetSci 2026, Chair! June, 2025, Boston, MA**
- **AccelNet MultiNet: Future Directions Symposium, Lead Organizer..** 2-day symposium, research talks, panel discussions, and breakout sessions focused on multilayer networks, with the goal of characterizing major advances, challenges, and priorities in the field, 40-50 participants, Boston, MA, July 2022
- **Collabathon, Organizer.** 3-day exercise bringing together scholars to focus on the core idea to discover and analyze, dynamic network structures. Participants identify all techniques for rewiring network edges and developed new software tools | 25 early career researchers, Portland, ME, June 2022.
- **Multilayer Network Satellite, Lead Organizer.** Half-day workshop with invited talks, panels, and lightning sessions by early career scholars participating in NSF program for US-Europe research exchanges. July, 2021.

- ***Society of Young Network Scientists (SYNS), Founder & Organizer.*** Led the formation and obtained funding for student society. Advisor for student organizers for the inaugural symposium in summer 2017, followed by annual-ish meetings, in process of merging with student group, NetPLACE in 2024.
- ***Women in Network Science, Co-founder.*** organized community dedicated to stimulating opportunities for education, employment, and career advancement of women in network science, Boston, MA, March 2018
- ***CompleNet, Conference Chair.*** 4-day international event that featured over 40 talks, 2 poster sessions and drew 240 attendees, Boston, MA, March 2018.
- ***Network Science Workshop Future, Lead Organizer.*** Selected by the Office of the Secretary of Defense OSD-ASD(R&E) to design and host meeting of top scientists to map the state of the field | 40 participants, Washington DC, 2016.
- ***NetSci Satellite, Lead Organizer.*** *Cooperative Team Network workshop*, Coordinated funding and organized workshop | 45-50 participants, Berkeley, CA, 2017.
- ***Sunbelt 2016, Organizer.*** Helped coordination for the annual 6-day conference for the International Network for Social Network Analysts (INSNA) | >1000 attendees, Newport Beach, CA, 2015.
- ***Applied Math Problem, Designer and Evaluator.*** Head judge and math problem author, Interdisciplinary Contest in Modeling (ICM), grade hundreds of submissions for 8 years. Undergrads and High School students are given 72-hours to prepare solutions (max 20-pages) for applied network problems | 2012- 2021.
- **Journal Reviewer:**
 - *Editorial Board member, Connections* (Official journal of the International Network of Social Network Analysts), 2005 – 2018.
 - *Special Issue Reviewer, Health Education & Behaviors*, including special issue entitled ‘*Systems Science Applications in Health Promotion and Public Health*’, 2012.
 - *Procedia Proceedings from the 5th UK Social Networks Conference*, 2008-10.
- **Technical Review Committees:**
 - *NSF AccelNet*, reviewed 15 collaborative research proposals for \$4-5M on diverse topics, 2021.
 - *Network Science-CTA, Collaborative Research Alliance* between the Army Research Lab, University and industry organizations: 15-20 proposals for \$300-500K focus on area of: ‘*Trust, Influence, Modeling and Enhancing Human Performance*’, 2013 & 2014.
 - *Minerva Initiative*, Office of Secretary of Defense program to fund basic research in the social sciences: Annual review committee for ‘*Models of societal resilience of change*’, and ‘*Theories of power and deterrence*’, review 12-15 proposals for \$2-6M: 2013 & 2014.
- **Academic Advisor**
 - *Co-advisor to doctoral student*, Brennan Klein, recipient of the *National Defense Science & Engineering Graduate Fellowship (NDSEG)*. Fully funded doctoral tuition and stipend for 2016-19.
 - *Thesis advisor to undergraduate cadet*, Evan Szablowski recipient of Rhodes Scholar Award, Full scholarship to Oxford for 2012-2016.
 - *Academic advisor to undergraduate cadet*, Katherine Miller, recipient of Truman Scholarship and the Point Scholarship Award; Full scholarship to Yale, 2010-2014.
 - *Advisor and co-author to undergraduate cadet*, Katie Miller, recipient of the 2011 Elise M. Boulding Undergraduate Student Paper Award for the co-authored paper, *Network evaluation of cadet attitudes towards the repeal of DADT* for 2010.

Awards & Honors & Recognitions

- *Exceptional Performance Award*, College of Science, recognizing extraordinary efforts critical to the mission of Northeastern University, June, 2021.
- *Program Participant selection, Institute on Systems Science and Health Award (ISSH)*: 5-day workshop and research development on Agent-Based Modeling supported by NIH, CDC, & Office of Behavioral and Social Sciences Research (OBSSR), June 13-18, 2010.
- *Alpha Kappa Delta, International Sociology Honor Society Award*, March 4, 2010.
- *National Institute of Drug Abuse (NIDA) Early Career Investigator Award*, American Public Health Association Conference, Washington, DC, 2005