

Mattsson, Carolina E.S.

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Education

Northeastern University, Boston, MA.

PhD Candidate in Network Science (5th year) | NSF Graduate Research Fellow

Cumulative GPA: 3.97/4.00 42 Credit Hours

Expected Graduation May 2020

Lehigh University, Bethlehem, PA.

Bachelor of Science in Physics | Bachelor of Arts in International Relations | Eckardt Scholar Program

Cumulative GPA: 3.94/4.00 180 Credit Hours

Graduated May 2014

Publications

- “Follow the money: making sense of payment systems” *Under review.* 2019
By Carolina Mattsson
- “Placing social ties in context using timely hybrid data collection” *Under review.* 2019
By Carolina Mattsson, Drew Margolin, Stefan Wojcik, David Lazer

Conference Presentations

- “Follow the money: defining node sequences on weighted and directed temporal networks”
3rd Workshop on Statistical Physics for Financial and Economic Networks, Paris, France 06/12/2018
International Conference on Complex Networks 2018, Boston, MA 03/06/2018
- “What does mobile metadata measure? Insights from a pilot study during a sudden emergency”
NetMob Conference 2017, Vodafone Village, Milan, Italy 04/07/2017
- “Interpersonal network dynamics in an emerging crisis”
XXXVI Sunbelt Conference 2016, Newport Beach, CA 04/09/2016
- Poster at the Workshop on Information in Networks Conference, New York, NY 10/01/2015
- Poster at the APS Division of Plasma Physics Conference, Denver, CO 11/12/2013

Professional and Research Experience

Graduate Research Assistant, Network Science Institute, Northeastern University 09/2014 -

- Develop and apply network science in the context of financial transaction data from real-world payment systems
- Advance methods in computational social science to make digital trace and administrative data useful to researchers
- Reference: Professor David Lazer 617-373-1010 davelazer@gmail.com

Joint research project with Microfinance Opportunities, Cambridge MA 10/2016 -

- Proposed and conducted research projects for the Gates Foundation and IFC on digital financial services in the developing world
- Quantified and mapped the circulation of e-money within a mobile money payment system from its transaction records
- Processed and analyzed survey data from Financial Inclusion Insights on mobile money use across three countries and three years
- Reference: Dr. Guy Stuart guystuart@mfopps.org

Consultant, Cignifi Inc., Cambridge MA 10/2015 - 11/2015

- Provided subject-area expertise and conducted network analysis for an IFC Report to a mobile money provider

Senior Honors Thesis, International Relations, Lehigh University 05/2013 - 05/2014

- Explored the state of nuclear energy in several key countries, and the factors affecting its trajectory after major accidents
- Presented at the Eckardt Scholar Senior Thesis Symposium; received the Campbell and Lemmon Prizes



National Undergraduate Fellowship, Internship, General Atomics, San Diego, CA, 92186

06/2013 – 08/2013

- Participated in a one-week course on plasma physics; studied the material properties of boron-carbide, an ultra-hard ceramic

Coursework Summary

Physics of Networks

- Complex Networks
- Network Science Data
- Dynamic Processes on Complex Networks

Social Science

- Social Networks
- Social Capital & Resilience
- International Economic Development

Computer Science

- Data Mining Techniques
- Bayesian & Network Statistics
- Algorithms

Schools and Workshops

- Workshop on Statistical Physics for Financial and Economic Networks 06/19/17; 06/12/18
- Participant, Economics of Money and Banking, Columbia University, Coursera 09/08/17 - 12/11/17
- Participant, Complex Systems Summer School, Santa Fe Institute, Santa Fe, NM 06/07/15 - 07/03/15

Service and Leadership

- Organizer, 4th Workshop on Statistical Physics for Financial and Economic Networks 2019
- Program Committee, 5th International Conference on Computational Social Science 2019
- Schools, Poster Session, and Satellite Co-Chair, International Conference on Network Science 2019
- Liaison to Invited Speakers, International Conference on Complex Networks 2018
- Organizing Member, Society for Young Network Scientists 2018-
- Founding President, Network Science Institute Graduate Student Association, Northeastern University 2016-2018
- Member, Graduate Student Council, Northeastern University College of Science 2015-2018

Awards and Fellowships

- Fellow, National Science Foundation Graduate Research Fellowship Program, 2015-2020
- Fellow, NULab for Texts, Maps, and Networks at Northeastern University, 2014-2015
- The Oles M. Smolansky Award for Academic Excellence in International Relations, May 2014
- The Donald T. Campbell Social Science Research Prize, May 2014
- The Lemmon Prize, May 2014
- Finalist, Rhodes Scholarship and Marshall Scholarship, 2014
- Lehigh Academic Merit Award 2010-2014
- Malcolm J. Gordon, Jr. Physics Prize, 2011
- Member, Phi Beta Kappa

Programming Languages Proficient in R, Python, and Unix. Familiar with SPSS, Stata, Fortran, APIs, and web development. Native fluency in English and Swedish. Fluency in Spanish.