

Carolina Mattsson, PhD

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AFFILIATION	Leiden University Leiden Institute for Advanced Computer Science Niels Bohrweg 1, 2333 CA Leiden The Netherlands	2020-present
EDUCATION	Northeastern University Ph.D. Network Science	March 23, 2020
	Lehigh University B.S. Physics B.A. International Relations Eckardt Scholar Program	May, 2014
JOURNAL ARTICLES	Functional structure in production networks Carolina E.S. Mattsson, Frank W. Takes, Eelke M. Heemskerk, Cees Diks, Gert Buiten, Albert Faber, Peter M.A. Slood <i>Frontiers in Big Data</i> 4:666712 doi.org/10.3389/fdata.2021.666712	2021
	Trajectories through temporal networks Carolina E.S. Mattsson, Frank W. Takes <i>Applied Network Science</i> 6(1), 1-31 doi.org/10.1007/s41109-021-00374-7	2021
REPORTS	Complexity economics and the energy transition in Zeeland Carolina Mattsson, Frank W. Takes, Eelke M. Heemskerk, Cees Diks, Gert Buiten, Peter M.A. Slood. <i>Dutch Ministry of Economic Affairs and Climate Policy</i>	2021
GRANTS & FELLOWSHIPS	Open Competition Domain Science XS Dutch Research Council (NWO)	<i>in preparation</i>
INVITED TALKS	Tracing the movement of money with transaction data Eurasian Summit for Models of Society, Tokyo Institute of Technology 03/2021	
	Trajectories through temporal networks Leiden Complex Networks Network Seminar, Leiden University	10/2020
	Networks of money flow at high resolution Dutch Network Economics Day, Tinbergen Institute	10/2020
	Money flow networks from mobile money transaction data Economics Department Seminar, St. Olaf College	10/2020
PRESENTATIONS	Functional structure in production networks with Frank Takes, Eelke Heemskerk, Cees Diks, Gert Buiten, Peter Slood	

INET Young Academics Network Conference, Cambridge, UK	06/2021
North American Social Networks Conference, Virtual	01/2021

Networks of money flow at high resolution

Southern Economics Association Annual Meeting, New Orleans, LA	11/2020
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Follow the money: making sense of financial transaction data

<i>demo</i> at BigSurv20 Big Data Meets Survey Science, Utrecht, NL	11/2020
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Someone to call on: studying social ties in action

with Drew Margolin, Stefan Wojcik, David Lazer

BigSurv20 Big Data Meets Survey Science, Utrecht, NL	11/2020
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INSNA Conference Sunbelt XL, Paris, FR	07/2020
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TEACHING	LISS238: Social Network Analysis	2020
	London Interdisciplinary Social Science Doctoral Training Partnership Kings College London Instructor: <i>planned and gave all lectures, facilitated programming exercises, adapted syllabus, adapted lecture materials.</i>	
SUPERVISION	Jingsen Chen	04-2021
	M.Sc. Computer Science, Leiden University	Leiden, NL
	Supervised project: “The Impact of Financial Activity On Trajectory Heuristics”	
	Martijn Vlak	03-2021
	M.Sc. ICT in Business, Leiden University	Leiden, NL
	Co-supervised thesis: “Impact of the intelligent lockdown on the Dutch inter-industry transaction network”	
	Niek Buwalda	08-2020
	M.Sc. Computer Science, Leiden University	Leiden, NL
	Reader for thesis: “Obtaining a network-driven understanding of the differences in user-level interaction within topical online communities”	

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PROFESSIONAL AFFILIATIONS • Network Science Society • American Economic Association
• Society for Young Network Scientists • INET Young Scholar Initiative
• International Network of Social Network Analysis

REVIEWING • EPJ Data Science • Japanese Economic Review
• Frontiers in Big Data

SERVICE **Southern Economics Association Annual Meeting**
Discussant, New Orleans, LA 2020

International Conference on Network Science
Program Committee Member, NetSci Rome 2020
Program Committee Member, NetSci-X Tokyo 2020

International Conference on Computational Social Science
Program Committee Member, IC2S2 Zurich 2021

Society for Young Network Scientists
Mentor, NetSci Satellite Workshop 2020

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RESEARCH POSITIONS	Postdoctoral Researcher in Network Science	2020-2021
	Leiden Institute of Advanced Computer Science Advance projects on the structure of production networks, real-world transaction data from payment systems, and temporal network representations. Co-supervise MSc students in the Computational Network Science Lab.	Leiden, Netherlands
PROJECTS	Velocity of money	2021
	<i>with Allison Luedkte, Hanjo Boekhout, & Frank Takes</i>	
	Project Lead. The objective of this project is to bring into the world empirical measurements of the velocity of money, and network models of the movement of money. The two prongs are related but will end up being different papers. <i>Empirical paper at outline stage. Grant proposal at final draft stage.</i>	
	Sarafu digital community currency	2021
	<i>with Teodoro Criscione, Frank Takes, & Will Ruddick</i>	
	Project Manager. The objective of this project is to ensure the responsible publication of transaction records from the Sarafu digital community currency. Doing a cool descriptive paper would be awesome. Writing these two papers seems to be <i>well</i> in line with what Teodoro needs to progress in his PhD; OK. <i>Data Descriptor is at draft stage. Descriptive paper at outline stage.</i>	
	Higer-order play in association football	2021
	<i>with Rens Meerthoff, Frank Takes, & Arno Knobbe</i>	
	Technical Contributor. The objective of this project is to figure out why winning teams play with second-order passing dynamics. Fun! <i>At the exploration stage.</i>	
	Complexity and vulnerability of regional industrial clusters	2021
	<i>with Ministry of Economic Affairs and Climate Policy (EZK), Institute for Advanced Study (IAS), and Statistics Netherlands (CBS)</i>	
	Technical Lead. The objective of this project is to bridge the gap between complexity approaches and economic policy analysis. The project has produced results on the structure of production networks that are at the frontier of academic research. The report interprets these findings in the context of reducing carbon emissions in Zeeland, an industrial regions of the Netherlands. <i>Paper is published. Report in final draft stage.</i>	
	Network and temporal structure of monetary flow	2019
	<i>with International Monetary Fund, Washington D.C., USA</i>	
	Technical Lead. The objective of this project was to study the network structure of a mobile money payment system. The publication process is ongoing. <i>Paper is at draft stage.</i>	