# NETWORK SCIENCE

CAMBRIDGE UNIVERSITY PRESS

Published online by Cambridge University Press

#### Network Science Editorial Team

EDITORS

Ulrik Brandes (Coordinating Editor),

Computer Science and Mathematics, ETH Zürich, Switzerland Ronald Breiger, Social and Political Science, University of

Arizona, USA

Noshir Contractor, Communication, Management, and Computational Social Science, Northwestern University, USA

Marta Gonzalez, Physics, UC Berkeley, USA

Laura Koehly, Psychology, Public Health, and Medicine, National Human Genome Research Institute, USA

Filippo Menczer, Information Science, Indiana University, USA

Fernando Vega-Redondo, Economics, Bocconi University, Italy

Stanley Wasserman, Statistics and Behavioral Science, Indiana University, USA

DEPUTY EDITOR

Christoph Stadtfeld, ETH Zürich, Switzerland

ASSOCIATE EDITORS

Sinan Aral, Information Science, Management, New York University, USA

Alain Barrat, Physics, CNRS, France

Yann Bramoulle, Economics, Aix-Marseille University, France

Dirk Brockmann, Computer Science, Applied Mathematics, Northwestern University, USA

Nicholas Christakis, Sociology, Medicine, Public Health, Yale University, USA

Jonathon Cummings, Business, Duke University, USA

Padraig Cunningham, Computer Science, University College Dublin, Ireland

Matthew Elliott, Economics, California Institute of Technology, USA

Christos Faloutsos, Computer Science, Data Mining, Carnegie-Mellon University, USA

Katherine Faust, Sociology, University of California, Irvine, USA

James Fowler, Political Science, Public Health, Genetics,

University of California, San Diego, USA

Andrea Galeotti, Economics, University of Essex, UK

David Hunter, Statistics, Pennsylvania State University, USA

Yoshihisa Kashima, Psychology, University

of Melbourne, Australia

Peter Key, Mathematics, Microsoft Research, UK

Laura Koehly, Psychology, Nationl Human Genome Research Institute, USA

Eric Kolaczyk, Statistics, Boston University, USA

David Krackhardt, Public Policy, Business, Carnegie-Mellon University, USA

David Lazer, Information Science, Political Science, Northeastern University, USA

Roger Leenders, Business, Organization Studies, Tilburg University, Netherlands

Kristina Lerman, Computer Science, ISI and University of Southern California, USA

Mark Lubell, Political Science, Environmental Policy, University of California, Davis, USA

Winter Mason, Psychology, Cognitive Science, Stevens Institute, USA James Moody, Sociology, Duke University, USA

Sue Moon, Computer Science, Korea Advanced Institute of Science and Technology, Republic of Korea

Romualdo Pastor-Satorras, Mathematics, Physics, Polytechnic University of Catalunia, Spain

Bernice Pescosolido, Sociology, Indiana University, USA

Richard Rothenberg, Public Health, Epidemiology, Georgia State University, USA

Olaf Sporns, Psychology, Neuroscience, Indiana University, USA Douglas Steinley, Psychology, Statistics, University of Missouri, USA Adam Szeidl, Economics, Central European University, Hungary Zoltan Toroczkai, Physics, University of Notre Dame, USA

Marco van der Leij, Economics, University of Amsterdam, Netherlands

MANAGING EDITOR

Denise Weber, ETH Zürich, Switzerland

#### **Network Science**

Network Science is an important journal for an important discipline - one using the network paradigm, focusing on actors and relational linkages, to inform research, methodology, and applications from many fields across the natural, social, engineering and informational sciences. Given growing understanding of the interconnectedness and globalization of the world, network methods are an increasingly recognized way to research aspects of modern society along with the individuals, organizations, and other actors within it.

The discipline is ready for a comprehensive journal, open to papers from all relevant areas. Network Science is a defining work, shaping this new discipline. The journal welcomes contributions from researchers in all areas working on network theory, methods, and data.

SUBSCRIPTION INFORMATION

Network Science (ISSN: 2050-1242) is published four times per year, in March, June, September, and December, by Cambridge University Press, One Liberty Plaza, 20th floor, New York, NY 10006, USA. Periodicals postage rate paid at New York, NY, and at additional mailing offices. POSTMASTER: Send address changes in the USA, Canada, and Mexico to: Network Science, Cambridge University Press, Journals Fulfillment Department, One Liberty Plaza, 20th floor, New York, NY 10006. Send address changes elsewhere to Network Science, Cambridge University Press, Journals Fulfillment Department, UPH, Shaftesbury Road, Cambridge CB2 8BS, England.

The subscription price of Volume 8 (2020) including delivery by air where appropriate (but excluding VAT), is \$846.00 (£530.00) for institutions print and online; \$803.00 (£501.00) for institutions online only.

Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publisher: Cambridge University Press, Journals Fulfillment Department, Cambridge University Press, One Liberty Plaza, New York, NY 10006, USA; or Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, UK.

For further information, please contact journals@cambridge.org.

For information on display ad sizes, rates, and deadlines for copy, please contact USAdSales@cambridge.org.

For submissions information, please visit cambridge.org/NWS.

ISSN: 2050-1242

EISSN: 2050-1250

Copyright © Cambridge University Press 2020. All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms and contacts are available at: cambridge.org/about-us/rights-permissions

Permission to copy (for users in the U.S.A.) is available from Copyright Clearance Center <a href="http://www.copyright.com">http://www.copyright.com</a>, email: <a href="mailto:info@copyright.com">info@copyright.com</a>.

## **NETWORK SCIENCE**

Volume 8 Number 2

## FRONTIERS IN EGOCENTRIC NETWORK ANALYSIS (1/2) EDITED BY BREA L. PERRY, BERNICE A. PESCOSOLIDO, MARIO L. SMALL

AND ANN MCCRANIE

### **CONTENTS**

Introduction to the Special Issue on Ego Networks BREA L. PERRY, BERNICE A. PESCOSOLIDO, MARIO L. SMALL AND ANN MCCRANIE	137
Articles	
Network Typologies	
Structure in personal networks: Constructing and comparing typologies RAFFAELE VACCA	142
Personal networks and psychological attributes: Exploring individual differences in personality and sense of community and their relationship to the structure of personal networks	
ISIDRO MAYA-JARIEGO, SREBRENKA LETINA AND ELENA GONZÁLEZ TINOCO	168
Methods and Measurements	
The embeddedness of social capital in personal networks JOSÉ LUIS MOLINA, ALEJANDRO GARCÍA-MACÍAS, MIRANDA J. LUBBERS AND HUGO VALENZUELA-GARCIA	189
Assessing the stability of egocentric networks over time using the digital participant-aided sociogram tool Network Canvas BERNIE HOGAN, PATRICK JANULIS, GREGORY LEE PHILLIPS II, JOSHUA MELVILLE,	
BRIAN MUSTANSKI, NOSHIR CONTRACTOR AND MICHELLE BIRKETT	204
Collecting egocentric network data with visual tools: A comparative study BETINA HOLLSTEIN, TOM TÖPFER AND JÜRGEN PFEFFER	223
Noting the ties after tying the knot: Photo-based elicitation of retrospective personal network data	
ALEXANDRA MARIN AND CHANG LIN	25]
Roles of egos' and siblings' perceptions of maternal favoritism in adult children's depressive symptoms: A within-family network approach	
I III I SUITOR MEGAN GULIGAN MARISSA RURKA AND VIEFLHOU	271