

The National Academies of
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DIVISION OF BEHAVIORAL AND SOCIAL SCIENCES AND EDUCATION

Board on Behavioral, Cognitive, and Sensory Sciences

**DECADAL SURVEY OF SOCIAL AND BEHAVIORAL SCIENCES
FOR APPLICATIONS TO NATIONAL SECURITY**

AGENDA

**LEVERAGING ADVANCES IN SOCIAL NETWORK THINKING
FOR NATIONAL SECURITY: A WORKSHOP**

October 11, 2017

**Keck Center
500 Fifth Street, NW
Washington, DC
Room 201**

8:30 a.m. **Workshop Registration Opens**

9:00 a.m. Workshops Commence

9:00 a.m. **Welcome and Overview of Events**
Sujeeta Bhatt, Study Director
Audience information
Paul Sackett, University of Minnesota, SBS Decadal Survey Chair
Welcome
David Honey, Director of Science and Technology, ODNI, Study Sponsor
Sponsor perspective and context for study and workshops

9:30 a.m. **Opening Remarks on the Future of Social Network Thinking**
Kathleen Carley, Carnegie Mellon University, Workshop Committee Chair

Research Panel Presentations and Discussion

9:45 a.m. **Panel 1: Networks Plus – Beyond the Individual**

This panel will consider advances in combining social network thinking with new types of data. Research in this area will have an external focus on the position of individuals in the social and physical world. Key questions are: What are the gains to be made from a multi-level network analysis approach? How is a social network science embedded in the physical world valuable from an intelligence community perspective? Where could major gains be made with a small investment in research?

Moderators: Kathleen Carley, Carnegie Mellon University and Matthew Brashears, University of South Carolina

Leslie DeChurch, Northwestern University
Title: Organizing in Teams
Zachary Neal, Michigan State University
Title: The Future of Urban Network Research
Regina Joseph, New York University
Title: Super-synthesizers: Confronting the Coming Analytical Crisis in an Age of Influence
Guido Cervone, Pennsylvania State University
Title: Use of Crowdsourced Data during Emergencies

10:35 a.m. **Response to Presentations**
Randolph H. Pherson, Pherson Associates, LLC

10:45 a.m. **Discussion and Q&A**
Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

11:45 a.m. LUNCH (cafeteria is on the 3rd floor or food trucks are on 7th St, NW between F and G Streets)

12:45 a.m. **Panel 2: Networks Plus – Within the Individual**

This panel will consider advances in combining social network thinking with new types of investigations on cognition, neural influences, and social psychology. Research in this area will have an internal focus on how individuals perceive and process the social and physical world. Key questions are: What are the gains to be made by bringing cognition, perception, affect and an understanding of the actor's identity into social network modeling? How is a "cognitive" network science useful from an intelligence community perspective? Where could major gains be made with a small investment in research?

Moderators: Noshir Contractor, Northwestern University and Emily Falk, University of Pennsylvania

Carolyn Parkinson, University of California, Los Angeles
Title: The Brain in the Social World: Integrating Approaches from Social Neuroscience, Psychology and Social Network Analysis
Emily Falk, University of Pennsylvania (virtual presenter)
Title: Brain and Social Networks: Fundamental Building Blocks of Human Experience
Jesse Hoey, University of Waterloo
Title: Emotional Artificial Intelligence in Socio-Technical Systems
Kenny Joseph, Northeastern University
Title: Studying Identities and their Impact on Networks using Social Media data

1:35 p.m. **Response to Presentations**
Randolph H. Pherson, Pherson Associates, LLC

1:45 p.m. **Discussion and Q&A**
Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

2:30 p.m.	BREAK
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2:45 p.m. **Panel 3: Multi-Level, High-Dimensional Evolving and Emerging Networks**

This panel will consider advances in understanding networks that take into account the dynamic nature of networks and core challenges that impact certainty such as data bias, data stationarity, and hidden data. Key questions are: How are advances in this area useful from an intelligence community perspective? Where could major gains be made with a small investment in research? What are the core challenges for social network analysis when dealing with large datasets where the data may be partially hidden or covert and the sampled network itself may be random, evolving, or stationary?

Moderators: Noshir Contractor, Northwestern University and Markus Mobius, Microsoft

Hsinchun Chen, University of Arizona

Title: Exploring Dark Networks: From the Surface Web to the Dark Web

Benjamin Golub, Harvard University

Alexander Volfovsky, Duke University

Title: The Future of Complex Networks: Statistics, Algorithms and Causality.

3:35 p.m. **Response to Presentations**

Randolph H. Pherson, Pherson Associates, LLC

3:45 p.m. **Discussion and Q&A**

Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

4:30 p.m. **Summative Comments**

Scott Feld, Purdue University

4:50 p.m. **Closing Remarks**

Kathleen Carley, Carnegie Mellon University, Workshop Committee Chair

5:00 p.m.	ADJOURN
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Office of the Director of National Intelligence (ODNI)

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