

MIT Lincoln Laboratory
**GRAPH EXPLOITATION
SYMPOSIUM**



512757

GES-8

Issued: 26 February 2018

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- PREFACE
- ACKNOWLEDGMENTS
- AGENDA



PREFACE

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Graph Exploitation Symposium

The ninth annual Graph Exploitation Symposium 2018 brought together leading experts from universities, industry, and government to explore the state of the art and define a future roadmap in network science. The event was limited to a small group of invited attendees. The symposium took place at the MIT Endicott House.

Symposium Highlights

The two-day technical program topics of interest included:

- Modeling noise and uncertainty
- Models and techniques for dynamic, heterogeneous networks
- Analysis of anomalous, covert and hidden communities
- Network visualization and visual analytics
- Systems and architectures for large scale data
- Emerging research frontier: bio-cyber-physical applications



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ACKNOWLEDGMENTS

Organizers

Chairs

Sanjeev Mohindra / MIT Lincoln Laboratory
William Streilein / MIT Lincoln Laboratory

Technical Co-Chairs

Rajmonda Caceres / MIT Lincoln Laboratory
Benjamin Miller / MIT Lincoln Laboratory

Technical Committee

Edoardo Airoldi / Harvard University
Nadya Bliss / Arizona State University
Robert Bond / MIT Lincoln Laboratory
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Timothy Dasey / MIT Lincoln Laboratory
Ed Kao / MIT Lincoln Laboratory
Christopher Long / US Department of Defense
David Martinez / MIT Lincoln Laboratory
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AGENDA - DAY 1

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 - DAY 1 - 24 APRIL
 - DAY 2 - 25 APRIL

Day 1 24 April 2018

- 01 **Day One Keynote Jukka-Pekka Onnela**, Harvard University
Inference and model selection for mechanistic network models
- 02 **Tina Eliassi-Rad**, Northeastern University | *Learning to expand partially observed networks*
- 03 **Eric Kolaczyk**, Boston University | *Dynamic networks with multi-scale temporal structure*
- 04 **Danai Koutra**, University of Michigan | *Scalable inference and summarization of multi-source network data*
- 05 **Leanne Whitmore**, Sandia National Laboratories | *RetSynth: Solving all optimal retrosynthesis solutions using dynamically constrained integer linear programming*
- 06 **Lavanya Marla**, University of Illinois at Urbana-Champaign | *An efficient data-driven approach to static and dynamic ambulance location for emergency medical services*
- 07 **Christine Bassem**, Wellesley College | *Mechanisms in coordinated mobile crowd sensing platforms*
- 08 **Edward Kao**, MIT Lincoln Laboratory | *Influence estimation on social media networks using causal inference*
- 09 **Rand Waltzman**, Rand Corporation | *Out of network*



AGENDA - DAY 2

- PREFACE
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 - DAY 1 - 24 APRIL
 - DAY 2 - 25 APRIL

Day 2 25 April 2018

- 01 **Robert Bond**, MIT Lincoln Laboratory | *Network science and national security*
- 02 **Siddharth Samsi**, MIT Lincoln Laboratory | *Design, generation, and validation of extreme scale power-law graphs*
- 03 **Sanjukta Bhowmick**, University of Nebraska at Omaha | *Noise and dynamics in high expansion network*
- 04 **Edoardo Airoldi**, Harvard University | *Model-assisted design of experiments in the presence of social network information*
- 05 **Richard Lehoucq**, Sandia National Laboratories | *Classical, graph and nonlocal laplacians*
- 06 **Christopher Long**, U.S. Department of Defense | *A survey of modern analysis on graphs: open problems*