

November 14 - 16, 2017, Montreal, Canada

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## Symposium on Control and Information Theoretic Approaches to Privacy and Security Call for Papers

### General Co-Chairs:

Aditya Mahajan, McGill University

Ashish Khisti, University of Toronto

Rafael F. Schaefer, Technische Universität Berlin

### Technical Co-Chairs:

Holger Boche, Technische Universität München

Cedric Langbort, University of Illinois, Urbana Champaign

The ubiquity of technologies such as wireless communications, biometric identification systems, on-line data repositories, and smart electricity grids, has created new challenges in information security and privacy. Traditional approaches based on cryptography are far from adequate in such complex systems and fundamentally new techniques must be developed. Control and Information theory provide fundamental limits that can guide the development of methods for addressing these challenges. Historically, both Systems and Control and the Information Theory communities have developed independent approaches to deal with the issue of security and privacy. But various emerging applications require tools from both theories to be used in tandem. There has been relatively little effort in bringing the two fields together and have a cohesive discussion on modelling and solution approaches to security and privacy. The symposium aims to serve as such a venue that discusses the perspectives developed by both communities in a timely and productive manner. Topics of interest include but are not limited to:

- Modeling systems under cyber and physical attacks
- Intrusion detection and attack identification
- Secure state estimation and communication
- Game theoretic, supervisory, and robust control approaches to security and privacy
- Secrecy and secret key capacity of wireless channel
- Secure communication under adversarial attack
- Practical code design for physical layer security
- Secure cross-layer design techniques
- Secure communication with an uncertain physical layer
- Jamming-assisted secure wireless transmission
- Security and Privacy issues in applications (e.g., Smart Grids, UAVs, etc.)

**Paper Submission:** Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures and possible references, and with one additional optional 5th page containing only references) and extended abstracts (up to 2 pages, for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2017 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. The accepted abstracts will not be indexed in IEEE Xplore, however the abstracts and/or the presentations will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture and poster sessions.

### Important Dates:

- ❖ **May 15, 2017:** Paper submission due
- ❖ **June 30, 2017:** Notification of Acceptance
- ❖ **July 22, 2017:** Camera-ready papers due

For inquiries please contact: Aditya Mahajan ([aditja.mahajan@mcgill.ca](mailto:aditja.mahajan@mcgill.ca)), Ashish Khisti ([akhisti@ece.utoronto.ca](mailto:akhisti@ece.utoronto.ca)), or Rafael F. Schaefer ([rafael.schaefer@tu-berlin.de](mailto:rafael.schaefer@tu-berlin.de))