

# 8<sup>th</sup> Conference on Decision and Game Theory for Security – GameSec 2017

Vienna, Austria,  
23<sup>RD</sup> OCT – 25<sup>TH</sup> OCT 2017

Recent advances in information and communication technologies pose significant security challenges that impact all aspects of modern society. The 8<sup>th</sup> Conference on Decision and Game Theory for Security in Vienna, Austria, focuses on protection of heterogeneous, large-scale and dynamic systems as well as managing security risks faced by critical infrastructures through rigorous and practically-relevant analytical methods. GameSec invites novel, high-quality theoretical and practical-relevant contributions, which apply decision and game theory, as well as related techniques such as distributed optimization, dynamic control and mechanism design, to build resilient, secure, and dependable networked systems. The goal of GameSec is to bring together academic and industrial researchers in an effort to identify and discuss the major technical challenges and recent results that highlight the connection between game theory, control, distributed optimization, economic incentives and real world security, reputation, trust and privacy problems.

## MAIN TOPICS

- Game theory and mechanism design for security and privacy
- Decision making and decision theory for cybersecurity and security requirements engineering
- Security and privacy for the Internet-of-Things, cyber-physical systems, resilient control systems
- Pricing and economic incentives for building dependable and secure systems
- Risk assessment and security risk management
- Security investment and cyber insurance
- New approaches for security and privacy in cloud computing and for critical infrastructure
- Security and privacy of wireless and mobile communications, including user location privacy
- Dynamic control, learning, and optimization and approximation
- Socio-technological and behavioral approaches to security
- Empirical and experimental studies with game-theoretic or optimization analysis for security and privacy

## Special Track on “Data-Centric Models and Approaches”

In cyber and physical security and privacy applications, data plays an important role and presents fundamental challenges. In some domains, it is difficult to gather a large amount of data, and the data available may suffer from severe class imbalance, high noise, and numerous missing entries. In other domains, when multiple agents are involved, how the data presented to the agents impacts their decision making is under-explored. It can be challenging to incorporate data of the available form into the game-theoretic and decision-theoretic models for these domains, since many current approaches apply to precisely defined models and *how to define models using the available data* is unclear in many cases. In addition to the data-related challenges in cyber and physical security domains, the use of data in many domains leads to security and privacy concerns, and game-theoretic and decision-theoretic models can be designed for addressing such concerns. This special track invites submissions on various data-centric models and approaches, including work on empirical game theory; adversarial machine learning; data collection through crowdsourcing; synthetic data generation; applications of machine learning methods; novel techniques for handling real-world data and evaluating models using data. *For submissions, please use the topic “Data-Centric Models and Applications”*

## Call for Papers

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### IMPORTANT DATES

Abstract submission (optional): 15 June 2017  
**Paper submission (extended): 08 July 2017**  
Decision notification: 7 August 2017  
Camera-ready submission: 14 August 2017  
Conference: 23<sup>rd</sup> – 25<sup>th</sup> October 2017