

GameSec 2010

Conference on Decision and Game Theory for Security

22-23 November 2010, Berlin, Germany

www.gamesec-conf.org

GameSec 2010 Technical Program

Time	Day 1 - Monday 22 nd	Day 2 - Tuesday 23 rd
08:30 AM	Registration	
09:00 AM	Opening	Plenary 2 – J. P. Hubaux
10:00 AM	Plenary 1 – Nick Bambos	Break
	Break	Special Talk: New NSF Initiative
11:00 AM	Session 1 Security Investments & Planning	Session 4 Network Security & Botnets
12:00 PM	Lunch Break	Lunch Break
01:00 PM	Session 2 Privacy & Anonymity	Session 5 Authorization & Authentication
02:00 PM		Break
03:00 PM	Session 3 Adversarial & Robust Control	Session 6 Theory and Algorithms For Security
04:00 PM		
05:00 PM	Panel Discussion	Closing

GameSec 2010 Social Program

Welcome reception: *Sunday, November 21st, 19:00-21:00*

In the evening before the conference, we will have a reception with drinks and light food in the Skyline Cafe on the 20th floor of the [TU high-rise building](#), with a wonderful view of Berlin.

Conference dinner: *Monday, November 22nd, 19:30-22:00*

The dinner will be in the elegant restaurant [Brasserie am Gendarmenmarkt](#), which is [located at one of the most outstanding places, in the historical middle of Berlin](#). Free transportation will be provided from near conference location (at Ernst-Reuter-Platz) and back. Details will be announced during the conference.

Lunch, coffee and drinks will be provided to all participants during the conference.

DAY 1: November 22nd, Monday

Plenary Session 1: **A Risk Management View to Information Security**

9:30-10:30 Plenary Speaker: [Prof. Nick Bambos \(Stanford University, USA\)](#)

Session 1: **Security Investments and Planning**

Session Chair: Hossein Manshaei

11:00-11:30 “Design of Network Topology in an Adversarial Environment”
Assane Gueye, Jean C. Walrand, and Venkat Anantharam

11:30-12:00 “Optimal Information Security Investment with Penetration Testing”
Rainer Bohme and Márk Félegyházi

Session 2: **Privacy and Anonymity**

Session Chair: Levente Buttyan

13:00-13:30 “Tracking Games in Mobile Networks”, *Mathias Humbert, Mohammad Hossein Manshaei, Julien Freudiger, and Jean-Pierre Hubaux*

13:30-14:00 “gPath: A Game-Theoretic Path Selection Algorithm to Protect Tor’s Anonymity”
Nan Zhang, Wei Yu, Xinwen Fu, and Sajal K. Das

14:00-14:30 “When Do Firms Invest in Privacy-Preserving Technologies?”
Murat Kantarcioglu, Alain Bensoussan, and SingRu (Celine) Hoe

Session 3: **Adversarial and Robust Control**

Session Chair: John Baras

15:00-15:30 “Adversarial Control in a Delay Tolerant Network”
Eitan Altman, Tamer Başar, and Veeraruna Kavitha

15:30-16:00 “Security Interdependencies for Networked Control Systems with Identical Agents”
Saurabh Amin, Galina A. Schwartz, and S. Shankar Sastry

16:00-16:30 “Robust Control in Sparse Mobile Ad-Hoc Networks”
Eitan Altman, Alireza Aram, Tamer Başar, Corinne Touati, and Saswati Sarkar

Panel Discussion: **Future challenges in using Game Theoretic Frameworks for Security and Information Assurance**

17:00-18:00 Moderator: *John Baras*
Panelists: *Tamer Başar, Jean-Pierre Hubaux, Galina Schwartz*

DAY 2: November 23rd, Tuesday

Plenary Session 2: **Designing Network Security and Privacy Mechanisms: How Game Theory Can Help**

9:00-10:00 Plenary Speaker: [Prof. Jean-Pierre Hubaux \(EPFL, Switzerland\)](#)

Session 4: **Network Security and Botnets**

Session Chair: Jean Leneutre

10:30-10:50	Special Presentation: “Interface between Computer Science, Economics and Social Sciences: A New Initiative at NSF”, <i>Sajal K. Das (Program Director, NSF, USA)</i>
10:50-11:20	“A Game-Theoretical Approach for Finding Optimal Strategies in a Botnet Defense Model”, <i>Alain Bensoussan, Murat Kantarcioglu, and SingRu (Celine) Hoe</i>
11:20-11:50	“ISPs and Ad Networks against Botnet Ad Fraud”, <i>Nevena Vratonjic, Mohammad Hossein Manshaei, Maxim Raya, and Jean-Pierre Hubaux</i>
11:50-12:10	“A Localization Game in Wireless Sensor Networks” (SP) <i>Nicola Gatti, Mattia Monga, and Sabrina Sicari</i>
12:10-12:30	“Effective Multimodel Anomaly Detection Using Cooperative Negotiation” (SP) <i>Alberto Volpatto, Federico Maggi, and Stefano Zanero</i>

Session 5: **Authorization and Authentication**

Session Chair: Mark Felegyhazi

13:30-14:00	“The Password Game: Negative Externalities from Weak Password Practices” <i>Sören Preibusch and Joseph Bonneau</i>
14:00-14:20	“Towards a Game Theoretic Authorisation Model” (SP) <i>Farzad Salim, Jason Reid, Uwe Dulleck, and Ed Dawson</i>

Session 6: **Theory and Algorithms for Security**

Session Chair: George Theodorakopoulos

15:00-15:30	“Disperse or Unite? A Mathematical Model of Coordinated Attack” <i>Steve Alpern, Robbert Fokkink, Joram op den Kelder, and Tom Lidbetter</i>
15:30-15:50	“Uncertainty in Interdependent Security Games” (SP) <i>Benjamin Johnson, Jens Grossklags, Nicolas Christin, and John Chuang</i>
15:50-16:10	“Attack–Defense Trees and Two-Player Binary Zero-Sum Extensive Form Games Are Equivalent” (SP) <i>Barbara Kordy, Sjouke Mauw, Matthijs Melissen, and Patrick Schweitzer</i>
16:10-16:30	“Methods and Algorithms for Infinite Bayesian Stackelberg Security Games” (SP) <i>Christopher Kiekintveld, Janusz Marecki, and Milind Tambe</i>

Locations and Directions

Conference Venue

GameSec 2010 will take place on the campus of Technical University Berlin, Germany, on November 22-23, 2010.

The **conference venue** address is: *Heinrich Hertz Institute, Einsteinufer 37, 10587 Berlin Germany*. It is marked with a red "G" on the [map](#) below.

The **welcome reception** will be on the 20th floor of the TU high-rise building, where [Deutsche Telekom Laboratories \(T-Labs\)](#) is located. The address is *Ernst-Reuter-Platz 7, 10587 Berlin Germany*. It is marked with a magenta "T" on the [map](#) below.

The **conference dinner** will be in the restaurant [Brasserie am Gendarmenmarkt](#). The address is *Taubenstrasse 30, 10117 Berlin*. Tel: +49 (0) 30 20 45 35 01

General Transportation Information

Berlin has a superb public transportation system consisting of U-Bahn (metro, subway), buses, and S-Bahn (local trains). The conference location near the *Ernst-Reuter-Platz station* on line U2 (marked with a blue "U" on the [map below](#)). Nearby hotels are marked with an "H" on the map. The nearest airport is [Tegel International Airport \(TXL\)](#) which can be reached by Taxi in 15mins for a reasonable price (around 20 EUR).

Map

