

GameNets 2009, Boğaziçi University, İstanbul, Turkey

Social Program

Welcome Reception: May 13, 18:30-22:30, Kennedy Lodge, Boğaziçi Univ.

Gala Dinner: May 15, 19:30-24:00, buses leave at 18:30 from Boğaziçi Univ.

Technical Program at a Glance

Plenary Talks at Albert Long Hall

Technical Sessions and Lunch: Perkins Hall (The Faculty of Engineering)

	<i>Wednesday, May 13, 2009</i>	<i>Thursday, May 14, 2009</i>	<i>Friday, May 15, 2009</i>
8:30-9:00	Registration		
9:00-9:30	Opening Remarks		
9:30-10:30	Plenary Talk: R. Aumann	Plenary Talk: C. Canning	Plenary Talk: S. Goyal
10:30-11:15	<i>Coffee and Tea Break</i>	<i>Coffee and Tea Break</i>	<i>Coffee and Tea Break</i>
11:15-12:45	Cooperative Games	Learning	Stochastic Games
11:15-12:45	Power Control I	Evolutionary Games	Wireless Networks II
11:15-12:45	Emerging Communication Networks	Game Theoretic Network Models II	Pricing
12:30-14:00	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
14:00-15:30	Game Theoretic Network Models I		Spectrum Sharing II
14:00-15:30	Power Control II		Game Theoretic Network Models III
14:00-15:30	Equilibrium Analysis		Wireless Networks III
15:30-16:00	<i>Coffee and Tea Break</i>		<i>Coffee and Tea Break</i>
16:00-17:30	Spectrum Sharing I		P2P and Social Networks
16:00-17:30	Random Access Games		Wireless Networks IV
16:00-17:30	Wireless Networks I		Game Theoretic Network Models IV
16:00-17:30	Game Theoretic Analysis of Auctions and Network Security		Security Games

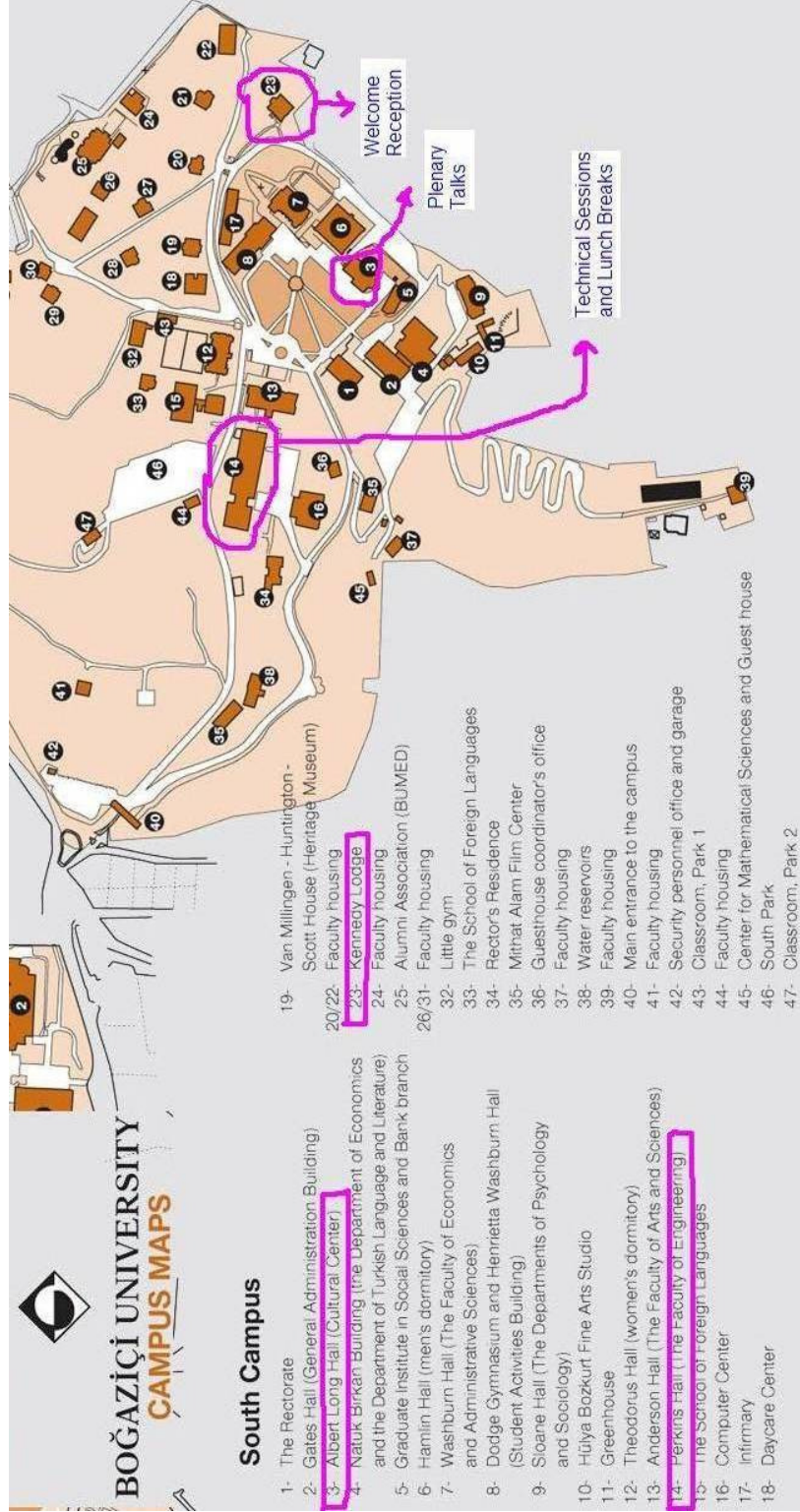


BOĞAZIÇI UNIVERSITY CAMPUS MAPS

South Campus

- 1- The Rectorate
- 2- Gates Hall (General Administration Building)
- 3- Albert Long Hall (Cultural Center)
- 4- Natuk Birkan Building (The Department of Economics and the Department of Turkish Language and Literature)
- 5- Graduate Institute in Social Sciences and Bank branch
- 6- Hamim Hall (men's dormitory)
- 7- Washburn Hall (The Faculty of Economics and Administrative Sciences)
- 8- Dodge Gymnasium and Henrietta Washburn Hall
- 9- Sloane Hall (The Departments of Psychology and Sociology)
- 10- Hülya Bozkurt Fine Arts Studio
- 11- Greenhouse
- 12- Theodoros Hall (women's dormitory)
- 13- Anderson Hall (The Faculty of Arts and Sciences)
- 14- Perkins Hall (The Faculty of Engineering)
- 15- The School of Foreign Languages
- 16- Computer Center
- 17- Infirmary
- 18- Daycare Center

- 19- Van Millingen - Huntington - Scott House (Heritage Museum)
- 20/22- Faculty Housing
- 23- Kennedy Lodge
- 24- Faculty housing
- 25- Alumni Association (BUMED)
- 26/31- Faculty housing
- 32- Little gym
- 33- The School of Foreign Languages
- 34- Rector's Residence
- 35- Mithat Alam Film Center
- 36- Guesthouse coordinator's office
- 37- Faculty housing
- 38- Water reservoirs
- 39- Faculty housing
- 40- Main entrance to the campus
- 41- Faculty housing
- 42- Security personnel office and garage
- 43- Classroom, Park 1
- 44- Faculty housing
- 45- Center for Mathematical Sciences and Guest house
- 46- South Park
- 47- Classroom, Park 2



Gamenets 2009 Technical Program

WEDNESDAY, MAY 13

9:30 - 10:30 **Plenary Talk I: *Rational Expectations in Games***

Robert Aumann, The Hebrew University, Jerusalem, Israel

Chair: *T. Başar*

11:15-12:45 **Session 1A1: *Cooperative Games***

Chair: *S. Buzzi*

Cooperative Game Theoretic Approach to Integrated Bandwidth Sharing and Allocation

Manzoor Ahmed Khan, Ahmet Cihat Toker, Cuong Truong, Fikret Sivrikaya and Sahin Albayrak

Coalition Formation through Learning in Autonomic Networks

Tao Jiang and John Baras

Minimum Cut Tree Games

Anne Schwahn

Decentralized Decision Making Process for Document Server Networks

Aurélie Beynier and Abdel-Ilah Mouaddib

11:15-12:45 **Session 1A2: *Power Control I***

Chair: *T. Alpcan*

A Noncooperative Approach to Joint Rate and Power Control for Infrastructure Wireless Networks

Giacomo Bacci and Marco Luise

Uplink Power Control and Base Station Association in Multichannel Cellular Networks

Chandramani Singh, Anurag Kumar and Rajesh Sundaresan

Power Games in MIMO Interference Systems

Gurdal Arslan, M. Fatih Demirkol and Serdar Yuksel

Distributed Power Control using Non-monotonic Reaction Curves

Omur Ozel and Elif Uysal-Biyikoglu

11:15-12:45 **Session 1A3: *Emerging Communication Networks***

Chair: *T. Tomala*

Oblivious Equilibrium: An Approximation to Large Population Dynamic Games with Concave Utility

Sachin Adlakha, Ramesh Johari, Gabriel Weintraub and Andrea Goldsmith

A Hierarchical Spatial Game Over Licensed Resources

Gaurav Kasbekar, Eitan Altman and Saswati Sarkar

Asynchronous Gossip Algorithms for Stochastic Optimization

S. Sundhar Ram, Angelia Nedić and Venugopal Veeravalli

14:00-15:30 **Session 1B1: *Game Theoretic Network Models I***

Chair: *R. Malhame*

Reliable Relaying with Uncertain Knowledge

Jiwoong Lee and Jean Walrand

N-Player Cournot and Price-Quantity Function Mixed Competition

Shuang Wu and John Musacchio

Traffic Engineering, Content Distribution, and Continuous Potential Games
Dominic DiPalantino and Ramesh Johari

Systems-Compatible Incentives
Dave Levin, Neil Spring and Bobby Bhattacharjee

14:00-15:30 **Session 1B2: Power Control II**
Chair: *G. Arslan*

From Competition to Coopetition: Stackelberg Equilibrium in Multi-user Power Control Games
Yi Su and Mihaela van der Schaar

A Power Allocation Strategy using Game Theory in Cognitive Radio Networks
Enrico Del Re, Gherardo Gorni, Luca Simone Ronga and Rosalba Suffritti

Stochastic Games with One-Step Delay Sharing Information Pattern with Application to Power Control
Eitan Altman, Vijay Kamble and Alonso Silva

MAC Games for Distributed Wireless Network Security with Incomplete Information of Selfish and Malicious User Types
Yalin Sagduyu, Randall Berry and Anthony Ephremides

14:00-15:30 **Session 1B3: Equilibrium Analysis**
Chair: *L. Pavel*

Mean Field Asymptotic of Markov Decision Evolutionary Games
Hamidou Tembine, Jean Yves Le Boudec, Rachid El Azouzi and Eitan Altman,

Job Market Signaling Equilibria with Unobserved Cost Functions and Higher Education Reforms
Giuseppe Rose

How to Find Nash Equilibria with Extreme Total Latency in Network Congestion Games?
Heike Sperber

Nash Equilibrium Design and Optimization
Tansu Alpcan and Lacro Pavel

16:00-17:30 **Session 1C1: Spectrum Sharing I**
Chair: *R. Berry*

Congestion Games with Resource Reuse and Applications in Spectrum Sharing
Mingyan Liu, Sahand Haji Ali Ahmad and Yunnan Wu

Provider-Customer Coalitional Games
Alireza Aram, Saswati Sarkar and Chandramani Singh

Service Provider Competition and Pricing for Dynamic Spectrum Allocation
Joydeep Acharya and Roy Yates

On the Efficiency of Sequential Auctions for Spectrum Sharing
Junjick Bae, Eyal Beigman, Randall Berry, Michael Honig and Rakesh Vohra

16:00-17:30 **Session 1C2: Random Access Games**
Chair: *Y. Hayel*

Achieving Coordination in Random Access Networks Without Explicit Message Passing
Jaeok Park and Mihaela van der Schaar

Correlated Evolutionarily Stable Strategies in Random Medium Access Control
Hamidou Tembine, Yezekael Hayel, Eitan Altman and Rachid El-Azouzi

A Hierarchical Slotted Aloha Game
Essaid Sabir, Rachid El-Azouzi and Yezekael Hayel

16:00-17:30 **Session 1C3: *Wireless Networks I***

Chair: *W. Saad*

On Achieving Group Strategyproof Information Dissemination in Wireless Networks
Ajay Gopinathan, Zongpeng Li and Baochun Li

Conjecture-Based Channel Selection Game for Delay-Sensitive Users in Multi-Channel Wireless Networks
Hsien-Po Shiang and Mihaela van der Schaar

Widely-Linear Filtering and Non-Cooperative Transceiver Optimization in Wireless Data Networks
Stefano Buzzi, H. Vincent Poor and Alessio Zappone

A Selfish Approach to Coalition Formation Among Unmanned Aerial Vehicles in Wireless Networks
Walid Saad, Zhu Han, Tamer Başar, Merouane Debbah and Are Hjørungnes

16:00-17:30 **Session 1C4: *Game-Theoretic Analysis of Auctions and Network Security***

Chair: *A. Özdağlar*

Equilibria and Convergence of Auctions on Networks
Peng Jia and Peter E. Caines

Coexistence with Malicious Nodes: A Game Theoretic Approach
Wenjing Wang, Mainak Chatterjee and Kevin Kwiat

Physical Layer Security Game: How to Date a Girl with Her Boyfriend on the Same Table
Zhu Han, Ninoslav Marina, Merouane Debbah and Are Hjørungnes

Secure Communication: A Mechanism Design Approach
Ludovic Renou and Tristan Tomala

THURSDAY, MAY 14

9:30 - 10:30 **Plenary Talk II: *The Majority and Minority Models on Regular and Random Graphs***

Chris Cannings, University of Sheffield, Sheffield, United Kingdom

Chair: *R. Srikant*

11:15-12:45 **Session 2A1: *Learning***

Chair: *S. Mannor*

Bidding Efficiently in Repeated Auctions with Entry and Observation Costs
Amir Danak and Shie Mannor

Learning in the Presence of Noise
Panayotis Mertikopoulos and Aris Moustakas

Online Learning in Markov Decision Processes with Arbitrarily Changing Rewards and Transitions
Jia Yuan Yu and Shie Mannor

Deterministic Approximation of Stochastic Evolutionary Dynamics
Robert Molzon

11:15-12:45 **Session 2A2: *Evolutionary Games***

Chair: *P. Bernhard*

Virulence Evolution Through a Latency-Transmission Trade-Off: Implications as to the Durability of Resistance in Agriculture
Frederic Hamelin

Strategy Dependent Mortality in Life History Games
David Ramsey

Games on Graphs that Grow Deterministically
Richard Southwell and Chris Cannings

Competition Between Foraging Predators and Hiding Preys as a Nonzero-Sum Differential Game
Andrei Akhmetzhanov, Pierre Bernhard, Frederic Grognard and Ludovic Mailleret

11:15-12:45 **Session 2A3: Game Theoretic Network Models II**
Chair: *R. Jain*

A Tight Characterization Of Strategic Games With A Unique Equilibrium
Sunil Shende, Lata Narayanan and Antony Ganchev

Combinatorial Agency with Audits
Raphael Eidenbenz and Stefan Schmid

A Game-Theoretical Approach to Incentive Design in Collaborative Intrusion Detection Networks
Quanyan Zhu, Carol Fung, Raouf Boutaba and Tamer Basar

Efficiency and Stability of Nash Equilibria in Resource Allocation Games
Tobias Harks and Konstantin Miller

FRIDAY, MAY 15

9:30 - 10:30 **Plenary Talk III: Strategic Network Formation**
Sanjeev Goyal, University of Cambridge, Cambridge, United Kingdom
Chair: *J. Huang*

11:15-12:45 **Session 3A1: Stochastic Games**
Chair: *P. Caines*

A Constrained Evolutionary Gaussian Multiple Access Channel Game
Quanyan Zhu, Hamidou Tembine and Tamer Basar

Communication Complexity of Stochastic Games
Nagarajan Krishnamurthy, T. Parthasarathy and G. Ravindran

Large Population Games in Radial Loss Networks: Computationally Tractable Equilibria for Distributed Network Admission Control
Zhongjing Ma, Peter Caines and Roland Malhame

11:15-12:45 **Session 3A2: Wireless Networks II**
Chair: *D. Palomar*

Power Control Game in Protected and Shared Bands: Manipulability of Nash Equilibrium
Eduard Jorswieck and Rami Mochaourab

Deployment Analysis of Cooperative OFDM Base Stations
Gaoning He, Hamidou Tembine and Merouane Debbah

Bargaining Over the Interference Channel with Total Power Constraints
Ephraim Zehavi and Amir Leshem

Competitive Optimization of Cognitive Radio MIMO Systems via Game Theory
Gesualdo Scutari, Daniel P. Palomar and Sergio Barbarossa

11:15-12:45 **Session 3A3: Pricing**

Chair: *M. Haviv*

Fairer Pricing of Resource Allocation Strategies – Individual Guarantees Approach
Siddharth Naik and Holger Boche

Competition for Subscribers Between Mobile Operators Sharing a Limited Resource
Hélène Le Cadre, Mustapha Bouhtou and Bruno Tuffin

Pricing Model for the Secondary Market Architecture in Cognitive Radio Networks
Gülfem Isiklar Alptekin and Ayse Basar Bener

Broadcasting Forever
Eitan Altman and Moshe Haviv

14:00-15:30 **Session 3B1: Spectrum Sharing II**

Chair: *R. La*

Computational Analysis of an Auction for Licensed and Unlicensed Use of Spectrum
William W. Sharkey, Fernando Beltrán, and Mark Bykowsky

Auction Mechanism for Spectrum Allocation and Profit Sharing
Sung Chun and Richard La

Evolution and Market Share of Wireless Community Networks
Mohammad Hossein Manshaei, Peter Marbach and Jean-Pierre Hubaux

Spectrum Sharing Games on the Interference Channel
Mehdi Bennis, Mael Le Treust, Samson Lasaulce, Merouane Debbah and Jorma Lilleberg

14:00-15:30 **Session 3B2: Game Theoretic Network Models III**

Chair: *R. El Azouzi*

Queueing Game Models for Differentiated Services
Rahul Jain and Parijat Dube

Nash Equilibrium Based Fairness
Hisao Kameda, Eitan Altman, Corinne Touati and Arnaud Legrand

Cooperation in Underwater Sensor Networks
Florent Garcin, Mohammad Hossein Manshaei and Jean-Pierre Hubaux

Games with Coupled Constraints in Optical Networks with General Topologies
Yan Pan and Lacro Pavel

14:00-15:30 **Session 3B3: Wireless Networks III**

Chair: *A. Leshem*

A Prioritized MAC Game Framework for Event Reporting in Sensor Networks
Qiong Shi, Cristina Comaniciu and Prathima Agrawal

Wireless Mesh Networking Games
Arnab Das, Azin Neishaboori and George Kesidis

Resource Allocation Games in Interference Relay Channels
Elena-Veronica Belmega, Brice Djeumou and Samson Lasaulce

Jamming in Wireless Networks: The Case of Several Jammers
Eitan Altman, Konstantin Avrachenkov and Andrey Garnaev

16:00-17:30 Session 3C1: P2P and Social Networks

Chair: *G. Kesidis*

Social Motives in Network Formation: An Experiment

Dennie Van Dolder and Vincent Buskens

A Simple Reputation Model for BitTorrent-like Incentives

Athichart Tangpong and George Kesidis

Strategic Reasoning About Bundling in Swarming Systems

Daniel Menasche, Giovanni Neglia, Don Towsley and Shlomo Zilberstein

Spread of (Mis)information in Social Networks

Daron Acemoglu, Asu Ozdaglar and Ali ParandehGheibi

16:00-17:30 Session 3C2: Wireless Networks IV

Chair: *E. Jorswieck*

Competitive Scheduling in Wireless Collision Channels with Correlated Channel State

Utku Ozan Candogan, Ishai Menache, Asuman Ozdaglar and Pablo A. Parrilo

The Role of the Access Point in Wi-Fi Networks with Selfish Nodes

Laura Giarre', Giovanni Neglia and Ilenia Tinnirello

Rate Allocation for Satellite Systems with Correlated Channels Based on a Stackelberg Game

Maria-Angeles Vazquez-Castro, Zhu Han, Are Hjørungnes and Ninoslav Marina

Game Theoretic Rate Control for Mobile Devices

Dimitrios Tsamis, Tansu Alpcan and Nick Bambos

16:00-17:30 Session 3C3: Game Theoretic Network Models IV

Chair: *C. Touati*

How to Hide Information for Later Use on Networks

Steve Alpern and Robbert Fokkink

Selection of Efficient Pure Strategies in Allocation Games

Pierre Coucheney, Corinne Touati and Bruno Gaujal

Congestion Games: Equilibria, Convergence, and Complexity

Berthold Vöcking

Convergence of Population Dynamics in Symmetric Routing Games with a Finite Number of Players

Eitan Altman, Vijay Kamble and Vivek Borkar

16:00-17:30 Session 3C4: Security Games II

Chair: *S. Dhall*

Uncertainty in the Weakest Link Security Game

Jens Grossklags and Benjamin Johnson

Towards Behavioral Control in Multi-Player Network Games

Andrey Lukyanenko and Andrei Gurtov

On the Number and the Distribution of the Nash Equilibria in SuperModular Games and their Impact on the Tipping Set

Sudarshan Dhall, S Lakshmiarahan and Pramode Verma

Stochastic Games for Security in Networks with Interdependent Nodes

Kien Nguyen, Tansu Alpcan and Tamer Basar