The Fifth International Conference

Game Theory and Management

27-29 June, 2011
St. Petersburg, Russia

Organized by
St. Petersburg University
Graduate School of Management,
Faculty of Applied Mathematics & Control Processes
and
The International Society of Dynamic Games
(Russian Chapter)

The Conference is being held at
Graduate School of Management, St. Petersburg University
Volkhovsky per., 3, St. Petersburg, Russia

Sponsored by
Graduate School of Management
and
Faculty of Applied Mathematics & Control Processes
St. Petersburg University

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Graduate School of Management, St. Petersburg University
Volkhovsky per., 3, St. Petersburg, Russia

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| Tuesday, June 28 | 09:30 – 10:00 | COFFEE | Room 307 |
|                 | 10:00 – 11:00 | PLENARY TALK (3) | Room 309 |
|                 | 11:00 – 11:30 | COFFEE BREAK | Room 307 |
|                 | 11:30 – 12:10 | PARALLEL SESSIONS (T1) | Room 309, 403, 410 |
|                 | 12:20 – 14:00 | LUNCH | University Center |
|                 | 14:00 – 16:20 | PARALLEL SESSIONS (T2) | Room 403, 410 |
|                 | 16:20 – 16:50 | COFFEE BREAK | Hall 4th floor |
|                 | 16:50 – 19:10 | PARALLEL SESSIONS (T3) | Room 403, 408, 410 |

| Wednesday, June 29 | 09:30 – 10:00 | COFFEE | Room 307 |
|                    | 10:00 – 11:00 | PLENARY TALK (4) | Room 309 |
|                    | 11:10 – 12:30 | TUTORIAL | Room 309 |
|                    | 11:10 – 12:30 | PARALLEL SESSIONS (W1) | Room 408, 410 |
|                    | 12:30 – 14:00 | LUNCH | University Center |
|                    | 14:00 – 16:00 | PARALLEL SESSIONS (W2) | Room 309, 410 |
|                    | 16:00 – 16:20 | COFFEE BREAK | Room 307 |
|                    | 16:20 – 17:30 | VIDEO PRESENTATION | Room 309 |
|                    | 17:30 – 18:00 | CLOSING SESSION | Room 309 |
|                    | 19:00 – 22:00 | CONFERENCE BANQUET | Restaurant “Ocean” |
Monday, June 27

09:50 – 10:55  PLENARY 1. GRAND HALL, room 309
Chair – Leon Petrosyan

Roger B. Myerson, University of Chicago (USA)
Sequential equilibria of games with infinite sets of types and actions

10:55 – 12:00  PLENARY 2. GRAND HALL, room 309
Chair – Nikolay Zenkevich

Jörgen W. Weibull, Stockholm School of Economics (Sweden)
Robust set-valued prediction in games

12:00 – 14:00  LUNCH

14:00 – 16:20  M1: PARALLEL SESSIONS

GTIO: room 309
Game Theory and Industrial Organizations
Chair – Boaz Golany

14:00 – 14:20 Igor Bykadorov, Sergey Kokovin and Evgeny Zhelobodko
The impact of market size on technological heterogeneity

14:20 – 14:40 Egidio D’Amato, Elia Daniele, Lina Mallozzi and Giovanni Petrone
Multilevel N leader - M follower decision making models with genetic algorithms and applications

14:40 – 15:00 Yukihiko Funaki, Harold Houba and Evgenia Motchenkova
Market Power in Markets with Price-Fee Competition and Costly Infrastructure

15:00 – 15:20 Pelin Canbolat, Boaz Golany, Inbal Mund and Uriel Rothblum
A stochastic competitive R&D race where “Winner takes all”

1 Lunch will be held at the University Center’s restaurant, Birzhevaya liniya, 6
15:20 – 15:40 Alexander Vasin and Agatha Sharikova
A model of the two stage market

15:40 – 16:00 Margarita Gladkova and Anna Sorokina
Evaluation of services quality provided by mobile operators under competition

16:00 – 16:20 Anastasiya Redkina
Behavioral and Structural Remedies in Merger Control

DGA: room 410
Dynamic Games and Applications
Chair – Josef Shinar

14:00 – 14:20 Josef Shinar, Valery Glizer and Vladimir Turetsky
Complete Solution of a Pursuit-Evasion Differential Game with Hybrid Evader Dynamics

14:20 – 14:40 Igor Shevchenko
On locally-optimizing pursuit strategies

14:40 – 15:00 Anatolii Kleimenov
Analysis of a Repeated Three-Person Game with Finite Number of Strategies for Players

15:00 – 15:20 Sergey Ganebny, Sergey Kumkov, Stephane Le Menec and Valerii Patsko
Differential Game with Two Pursuers and One Evader

15:20 – 15:40 Anna Iljina
The D.W.K. Yeung's Condition for Cooperative Differential Games with Nontransferable Payoffs

15:40 – 16:00 Elena Gubar, Ekaterina Zhitkova, Irina Nikitina and Lidia Fotina
The Evolutionary Model of Influenza in Risk-Group

16:00 – 16:20 Onik Mikaelyan
The set of Nash equilibria in a differential game using chance moves in limited number of points

16:20 – 16:40 COFFEE BREAK, room 307
16:40 – 19:00 M2: PARALLEL SESSIONS

CGA: room 309
Cooperative Games and Applications
Chair – Sergei Pechersky

16:40 – 17:00 Elena Yanovskaya
Consistent subsolutions of the least core

17:00 – 17:20 Ilya Katsev
The least square values for games with restricted cooperation

17:20 – 17:40 Natalia Naumova
Proportional solutions to games with restricted cooperation

17:40 – 18:00 Sergei Pechersky
An Axiomatic Characterization of a Proportional Excess Invariant Solution for NTU Games

18:00 – 18:20 Theo Driessen and Anna Khmelnitskaya
On one-concavity of data cost game

18:20 – 18:40 Gerhard Wilhelm Weber, Sirma Zeynep, Alparslan Gök and Eric Kropat
Recent Advances on Ellipsoidal Cooperative Games

18:40 – 19:00 Nadezhda Smirnova and Svetlana Tarashnina
On some properties of the [0,1]-Nucleolus in cooperative TU-games

ES: room 410
Equilibrium Solutions
Chair – Paolo Caravani

16:40 – 17:00 Vsevolod Korepanov and Dmitry Novikov
Reflexive partitioning equilibria

17:00 – 17:20 Paolo Caravani
On voluntariness of Nash Equilibrium

17:20 – 17:40 Pierre Von Mouche
On Nash Equilibrium (Semi-) Uniqueness Results for Smooth Aggregative Games
17:40 – 18:00 Agnieszka Wiszniewska-Matyszkiel
Belief Distorted Nash Equilibria - when beliefs about future create future

18:00 – 18:20 Gabriel Turbay
A strategic equilibrium for n-person cooperative games

18:20 – 18:40 Denis Kuzyutin, Maria Nikitina and Irina Marchenko
On the consistency of equilibria in multicriteria extensive games.

19:00 – 22:00 WELCOME PARTY

Tuesday, June 28

10:00 – 11:00 PLENARY 3. GRAND HALL, room 309
Chair – Elena Yanovskaya

Shmuel Zamir, The Hebrew University (Israel)

Extending the Condorcet Jury Theorem to a general dependent jury

11:10 – 12:10 T1: PARALLEL SESSIONS

GTM: room 309
Game Theory and Marketing
Chair – Alessandra Buratto

11:10-11:30 Bruno Viscolani and Andrea Baggio
Nash equilibria in an advertising game with damping interference effects

11:30-11:50 Alessandra Buratto and Luca Grosset
Advertising plan for a licensed brand in a complementary business with stochastic advertising effect

11:50-12:10 Anastasia Koroleva and Nikolay Zenkevich
Dynamic advertising competition on fashion market

2 Welcome party will be held at the room 403, 4th floor
GTE: room 403
Game Theory and Experiments
Chair – Nagore Iriberri

11:10 – 11:30 Arkady Konovalov
Do Experts Matter? Evidence from a Cascade Experiment

11:30 – 11:50 Ghazala Azmat and Nagore Iriberri
The Provision of Relative Performance Feedback Information: An Experimental Analysis of Performance and Happiness

11:50 – 12:10 Michael Lutsenko and Natalija Shadrintseva
A game-theoretic approach for assignment of items weights in the test

GTA1: room 410
Game Theory and Applications - 1
Chair – Elena Parilina

11:10-11:30 Olga Bogdanova and Elena Parilina
Diffusion of New Product in Social Networks

11:30-11:50 Vladimir Breer
Game-Theoretical Models of Non-Anonymous Multi-Threshold Behavior

11:50-12:10 Elena Inarra and Peio Zuazo
Players’ Beliefs and Discriminative Games

12:20 –14:00 LUNCH

14:00 – 16:20 T2: PARALLEL SESSIONS

NGA: room 403
Networking Games and Applications
Chair – Sergei Schreider

14:00 – 14:20 Vladimir Gurvich and Sergei Schreider
Stable families of coalitions for network resource allocation problems

14:20 – 14:40 Julia Chuyko and Andrei Gurtov
Selfish routing problem in wireless network
14:40 – 15:00 Evgeny Ivashko
*Dynamic Model of Lobbying in Social Networks*

15:00 – 15:20 Alexander Chkhartishvili and Denis Fedyanin
*On models of information management in social networks*

15:20 – 15:40 Anna Khmelnitskaya and Dolf Talman
*Web values and the average web value for cycle-free directed graph games*

15:40 – 16:00 Mikhail Karpov and Leon Petrosyan
*The game-theoretical model of cost allocation in communication network*

16:00 – 16:20 Svetlana Mamkina
*Hierarchical game model for sugar production*

**GTA2: room 410**  
**Game Theory and Applications - 2**  
Chair – Jörn Rothe

14:00 – 14:20 Polina Provotorova and Alexandra Zinchenko
*On the extreme points of polytopes of some subclasses of big boss games*

14:20 – 14:40 Jörn Rothe
*Uncertainty aversion and backward induction*

14:40 – 15:00 Victor Rozen
*Mathematical models for decision making with ordered outcomes*

15:00 – 15:20 Tatiana Savina
*Necessary and Sufficient Conditions for the Existence of Inclusion Map of Game with Preference Relations into Game with Payoff Functions*

15:20 – 15:40 Nikolaos Kakogiannis and George Papavassilopoulos
*Feedback Stackelberg Strategies for Dynamic Games with Energy Players Having Different Time Duration*

15:40 – 16:00 Gabriel Turbay
*The Stronger Player Paradox*
16:00 – 16:20 Shchiptsova Anna
Multinomial logit analysis and competitive behavior in the market

16:20 – 16:50 COFFEE BREAK, Hall 4th floor

16:50 – 19:10 T3: PARALLEL SESSIONS

GEM: room 403
Game Theory, Efficiency and Motivation
Chair – Nikolay Korgin

16:50 – 17:10 Lubov Schukina
Corporate Conflicts Influence On The Personnel Management Efficiency in Russia (Oil Companies Example)

17:10 – 17:30 Xavier Molinero, Andreas Polyméris, Fabián Riquelme and María José Serna
Efficient enumeration of complete simple games

17:30 – 17:50 Vladimir Burkov and Nikolay Korgin
Management games: implementing advanced robust incentive schemes

17:50 – 18:10 Gonzalo Olcina, Luisa Escriche and Empar Pons
The Dynamic Interaction between Entrepreneurship and the Public Sector Efficiency

18:10 – 18:30 Gonzalo Olcina, Penelope Hernandez and Raul Toral
Leadership and peer effects in an organization

18:30 – 18:50 Vladimir Burkov and Mikhail Goubko
Combining Incentive Schemes with Mechanisms of Counter Planning and Plan Adjustment

18:50 – 19:10 Enrique González-Arangüena, Conrado Manuel, Mónica Pozo and Anna Khamelnitskaya
Social Capital. A Game Theoretic Approach

SGV: room 408
Stochastic Games and Voting
Chair – Gerhard Wilhelm Weber

16:50 – 17:10 Alexei Zakharov
Probabilistic voting equilibria under non-risk-neutral candidates
17:10 – 17:30 Pavel Konyukhonskiy and Daria Shalygina
Stochastic cooperative games application concerning the realization of large-scale investment projects

17:30 – 17:50 Anna Ivashko
Optimal Double-Stopping Problem on Trajectories

17:50 – 18:10 Elena Parilina
Principles of Stable Cooperation in Stochastic Games

18:10 – 18:30 Büşra Zeynep Temoçin, Gerhard Wilhelm Weber, Nuno Azevedo, Diogo Pinheiro
Applications of stochastic hybrid systems in finance

18:30 – 18:50 Suriya Kumacheva
Tax auditing using statistical information about taxpayers

GTMA: room 410
Game Theory and Management Applications
Chair – Victor Domansky

16:50 – 17:10 Victor Domansky and Victoria Kreps
Decomposition of distributions $R^n$ and models of multistage bidding

17:10 – 17:30 Victor Domansky and Marina Sandomirskaya
Solutions for one-stage bidding game with incomplete information

17:30 – 17:50 Tatyana Seryogina
Showcase Showdown Game with sequential steps

17:50 – 18:10 Sofya Kiselgof
Matching with simplest semiorder preference relations

18:10 – 18:30 Tatyana Grigorova
Optimization of coalition structures in tree-like hierarchical games

18:30 – 18:50 Oleg Malafeyev and Olga Zenovich
Multi-agent interaction in the dynamic options model

18:50 – 19:10 Elena Gubar, Maria Zubareva and Julia Merzljakova
The optimization model of Encashment Process in the ATM Network
Wednesday, June 29

10:00 – 11:00  **PLENARY 4. GRAND HALL, room 309**  
Chair – Alexander Vasin

**Vladimir V. Mazalov**, Institute of Applied Mathematical Research, Karelian Research Center RAS (Russia)

*Bargaining Models and Mechanism Design*

11:10 – 12:30 **TUTORIAL. GRAND HALL, room 309**  
Chair – Nikolay Zenkevich

**Georges Zaccour**, GERAD, HEC Montreal (Canada)

*Dynamic Games in the Economics and Management of Pollution*

11:10 – 12:30 **W1: PARALLEL SESSIONS**

**ABC: room 410**

*Arbitration, Barters and Corruption*  
Chair – Gennady Ougolnitsky

11:10-11:30 **Julia Tokareva** and Vladimir Mazalov  
*Competitive tenders with a jury*

11:30-11:50 Andrew Antonenko, Andrew Chernushkin and Gennady Ougolnitsky  
*Game theoretic modeling of corruption in hierarchical control systems*

11:50-12:10 **Alexander Mentcher**  
*On a discrete arbitration procedure with nonuniform distribution*

**GSI: room 408**

*Game Theory, Strategy and Innovations*  
Chair – Gonzalo Olcina

11:10 – 11:30 **Vicente Calabuig** and Gonzalo Olcina  
*Collective Punishment and the Evolution of Preferences*

11:30 – 11:50 **Xeniya Grigorieva** and Oleg Malafeev  
*Static coalitional multicriteria model provided by the example of innovative projects*
11:50 – 12:10 **Georgy Alexandrov** and Nikolay Zenkevich  
*Nash Equilibrium Scenarios for Russian Automotive Market Development*

12:30 – 14:00 **LUNCH**

14:00 – 16:00 **W2: PARALLEL SESSIONS**

**GSC: room 410**  
Game Theory, Logistics and Supply Chain  
Chair – Richard Germain

14:00 – 14:20 **Zeynep Turgay**, Fikri Karaesmen and Lerzan Ormeci  
*Robust optimization of stochastic inventory control problems*

14:20 – 14:40 **Artem Sedakov**  
*One model of airline route formation*

14:40 – 15:00 **Mansur Gasratov** and Victor Zakharov  
*Games and inventory management with stochastic demand*

15:00 – 15:20 **Anna Sergeeva** and Vladimir Bure  
*A competition in the market logistics*

15:20 – 15:40 **Leon Petrosjan** and **Ilya Seryakov**  
*N-person transportation problem with non-overlapping paths*

15:40 – 16:00 Andrey Garnaev, Timo Hamalainen and **Mikhail Zolotukhin**  
*A Stackelberg tariff game between provider, a primary and secondary users*

**ENR: room 309**  
Environment and Natural Resources  
Chair – Georges Zaccour

14:00 – 14:20 **Anna Rettieva**  
*Discrete-time bioresource management problem with many players*

14:20 – 14:40 **Vladimir Matveenko** and **Alexei Korolev**  
*Mechanisms of Environmental Incentive Regulation: Why Ecological Policies in Transition and Developing Economies Are Not Effective?*
14:40 – 15:00 **Pablo Andrés-Domenech**, Guiomar Martín-Herrán and Georges Zaccour  
*Towards a Sustainable and Time-Consistent Use of the Forest*

15:00 – 15:15 **Ekaterina Shevkoplyas**  
*Stable Cooperation in Differential Game of Resource Extraction*

15:15 – 15:30 Stefan Wrzaczek, Ekaterina Shevkoplyas and **Sergey Kostyunin**  
*Differential Game of Pollution Control with overlapping generations*

15:30 – 15:45 **Denis Degterev**  
*International Law Regimes Modification: Game-Theoretic Approach*

15:45 – 16:00 **Nadezhda Kozlovskaya** and Nikolay Zenkevich  
*Stable coalitional solution under environmental constraints*

16:00 – 16:20 **COFFEE BREAK**, room 307

16:20 – 17:30 **PLENARY VIDEO PRESENTATION. GRAND HALL**, room 309  
Chair – Leon Petrosyan

**Martin Shubik**, Yale University (USA)  
*The Present and Future of Game Theory*

17:30 – 18:00 **CLOSING SESSION: GRAND HALL**, room 309  
Chair – Leon Petrosyan

19:00 – 22:00 **CONFERENCE BANQUET**

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3 Conference banquet will be held at the restaurant “Ocean”
MAP and PLANS