

The Tenth International Conference
Game Theory and Management

07-09 July, 2016
Saint Petersburg, Russia

Organized by
Saint Petersburg State University
and
The International Society of Dynamic Games
(Russian Chapter)

The Conference is being held at
Saint Petersburg State University
Volkhovsky per., 3, St. Petersburg, Russia

Program Committee

Leon Petrosyan (Russia) - chair; Nikolay Zenkevich (Russia) - co-chair; Eitan Altman (France); Jesus Mario Bilbao (Spain); Irinel Dragan (USA); Gao Hongwei (China); Andrey Garnaev (Russia); Margarita Gladkova (Russia); Sergiu Hart (Israel); Steffen Jørgensen (Denmark); Ehud Kalai (USA); Andrea Di Liddo (Italy); Vladimir Mazalov (Russia); Shigeo Muto (Japan); Yaroslava Pankratova (Russia); Artem Sedakov (Russia); Richard Staelin (USA); Krzysztof J. Szajowski (Poland); Anna Tur (Russia); Anna Veselova (Russia); Myrna Wooders (UK); David W.K. Yeung (HongKong); Georges Zaccour (Canada); Paul Zipkin (USA); Andrey Zyatchin (Russia)

Program

Saint Petersburg State University,
Volkhovsky per., 3, St. Petersburg, Russia

Thursday, July 07		
08:45 – 09:30	REGISTRATION	3 rd floor
08:45 – 09:30	COFFEE	Room 307
09:30 – 09:50	WELCOME ADDRESS	Room 309
09:50 – 10:55	PLENARY TALK (1)	Room 309
11:00 – 12:00	PLENARY TALK (2)	Room 309
12:10 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:30	PARALLEL SESSIONS (T1)	Room 209, 410
16:30 – 16:50	COFFEE BREAK	Room 307
16:50 – 19:00	PARALLEL SESSIONS (T2)	Room 209, 410
19:00 – 22:00	WELCOME PARTY	Room 309
Friday, July 08		
09:30 – 10:00	COFFEE	Room 307
10:00 – 11:00	PLENARY TALK (3)	Room 309
11:10 – 12:10	PARALLEL SESSIONS (F1)	Room 209, 410
12:20 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:30	PARALLEL SESSIONS (F2)	Room 309, 209, 410
16:30 – 16:50	COFFEE BREAK	Room 307
16:50 – 19:00	PARALLEL SESSIONS (F3)	Room 209, 410
Saturday, July 09		
09:30 – 10:00	COFFEE	Room 307
10:00 – 11:00	PLENARY TALK (4)	Room 309
11:10 – 12:10	PARALLEL SESSIONS (S1)	Room 209, 410
12:20 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:05	PARALLEL SESSIONS (S2)	Room 209, 410
16:10 – 16:30	COFFEE BREAK	Room 307
16:30 – 17:00	CLOSING SESSION	Room 209, 410
19:00 – 22:00	CONFERENCE BANQUET	Restaurant “Academia”

Thursday, July 07

08:45 – 09:30 REGISTRATION, 3^d floor

08:45 – 09:30 COFFEE, room 307

09:30 – 09:50 **WELCOME ADDRESS. GRAND HALL, room 309**
Co-chairs – Leon Petrosyan and Nikolay Zenkevich

09:50 – 10:55 **PLENARY 1. GRAND HALL, room 309**
Chair – Vladimir Mazalov

Jean-Jacques Herings, Maastricht University (The Netherlands)

Equilibrium and Matching under Price Control

11:00 – 12:00 **PLENARY 2. GRAND HALL, room 309**
Chair – Victoria Kreps

Eilon Solan, Tel Aviv University (Israel)

Multiplayer Stochastic Games: Techniques, Results, and Open Problems

12:10 – 14:00 LUNCH¹

13:30 – 14:00 COFFEE, room 307

14:00 – 16:30 **T1: PARALLEL SESSIONS**

DGA-1: room 209

Dynamic Games and Applications - 1

Chair – Anatolii Kleimenov

14:00 – 14:25 **Guennady Ougolnitsky** and Anatoly Usov
Comparative Analysis of Efficiency of the Methods of Sustainable Management in Hierarchical Differential Games

14:25 – 14:50 Vladimir Ushakov, **Alexander Matviychuk** and Andrey Ushakov
Solution of Control Problems of Nonlinear Systems on a Finite Time Interval

14:50 – 15:15 **Anna Rettieva**
Discrete-time Dynamic Potential Games

15:15 – 15:40 **Dmitrii Serkov**
On joint fixed points in chain-complete posets

¹ Lunch will be held at the University Center's restaurant, Birzhevaya liniya, 6

15:40 – 16:05 Aleksandr Chentsov and **Dmitrii Serkov**
The elements of the operator convexity in the construction of the programmed iteration method

16:05 – 16:30 **Anatolii Kleimenov**
Aggressive behavior in non-antagonistic positional differential two-person games

PRS: room 410
Integration, Pooling and Stability

Chair – Jing Fu

14:00 – 14:25 **Maria Nastych**
Strong Nash equilibrium in oligopoly market with horizontal integration

14:25 – 14:50 **Anastasiia Reusova** and Nikolay Zenkevich
Strategic Alliance Stability Factors

14:50 – 15:15 **Boris Yanauer**, Ekaterina Syrunina and Nikolay Zenkevich
CEO incentive plans improvement in the U.S. public companies on the base of game-theoretical modeling

15:15 – 15:40 **Stefanos Leonardos** and Costis Melolidakis
Cournot competition with an external supplier under capacity constraints and demand uncertainty

15:40 – 16:05 **Igor Asanov**
Do We Learn From Mistakes of Others? A Test of Observational Learning in the Bandit Problem

16:05 – 16:30 **Jing Fu**
Information pooling game in an interactive multi-portfolio optimization framework

16:30 – 16:50 COFFEE BREAK, room 307

16:50 – 19:00 **T2: PARALLEL SESSIONS**

CGA-1: room 410
Cooperative Games and Applications -1
Chair – Elena Yanovskaya

16:50 – 17:15 **Valery Vasilev**
On some fuzzy extensions of TU cooperative game

17:15 – 17:40 **Anna Khmel'nitskaya**, Gerard van der Laan and Dolf Talman
Generalization of binomial coefficients to numbers on the nodes of graphs

17:40 – 18:05 **Natalia Naumova**
Reactive and semi-reactive bargaining sets for games with restricted cooperation

18:05 – 18:30 **Elena Yanovskaya**
A characterization of the Nash Maximum Product (NMP) solution for Fair Division problems

DGA-2: room 209

Dynamic Games and Applications -2

Chair – Alexander Tarasyev

16:50 – 17:15 **Yurii Averboukh**
Value multifunction for deterministic mean field game

17:15 – 17:40 **Denis Kuzyutin**, Maria Nikitina and Irina Marchenko
Time-consistent cooperative solutions in multistage games with vector payoffs

17:40 – 18:05 **Ovanes Petrosian**
Random Informational Horizon in Looking Forward Approach for Cooperative Differential Games

18:05-18:30 **Igor Shevchenko** and Dusan Stipanovic
Smooth approximations for minimum and maximum functions and their use in the strategy design

18:30-18:55 **Alexander Tarasyev** and Nikolay Krasovskii
Dynamical Equilibria in Bimatrix Coordination Games

19:00 – 22:00 WELCOME PARTY²

² Welcome party will be held at the Grand Hall, room 309, 3^d floor

Friday, July 08

09:30 – 10:00 COFFEE, room 307

10:00 – 11:00 **PLENARY 3. GRAND HALL, room 309**

Chair – Leon Petrosyan

Eric Maskin, Harvard University (USA)

Elections and Strategic Voting: Condorcet and Borda

11:10 – 12:10 **F1: PARALLEL SESSIONS**

VW: room 410

Voting and Winning

Chair – Irit Nowik

11:10 – 11:30 **Anna Panova** and Petr Panov

On the costly voting model

11:30 – 11:50 Pavel Chebotarev, **Vitaly Malyshev**,

Yana Tsodikova, Anton Loginov, Zoya Lezina and Vadim Afonkin

On the Optimal Voting Quota in a Stochastic Environment

11:50 – 12:10 **Irit Nowik** and **Tahl Nowik**

Blotto Games with Costly Winnings

IISG: room 209

Incomplete Information and Search Games

Chair – Ryusuke Hohzaki

11:10 – 11:30 Misha Gavrilovich and **Victoria Kreps**

Games with asymmetric incomplete information as games with symmetric incomplete information and asymmetric computational resources

11:30 – 11:50 Semyon Mestnikov and **Nikolay Petrov**

The Sufficient Conditions k^ -detection in the Simple Search Game on the Plane*

11:50 – 12:10 **Ryusuke Hohzaki**

A Search Game with Incomplete Information on Detective Capability of Searcher

12:20 – 14:00 LUNCH

13:30 – 14:00 COFFEE, room 307

14:00 – 16:30 **F2: PARALLEL SESSIONS**

GTMA-1: room 410

Game Theory and Management Applications - 1

Chair – Igor Bykadorov

14:00 – 14:25 **Marina Sandomirskaja**

Nash-2 equilibrium: definition, interpretation, applications

14:25 – 14:50 **Natalia Nikitina** and Evgeny Ivashko

The Price of Anarchy in a Game for Drug Discovery

14:50 – 15:15 **Pavel Konyukhonskiy** and Victoria Holodkova

Game theory methods in the analysis of economic and political interaction at the international level

15:15 – 15:40 **Yulia Ibragimova** and Fedor Sandomirskiy

Competitive Market Mechanisms for Fair Division of Indivisible Goods

15:40 – 16:05 **Alexander Sidorov** and Jacques-Francois Thisse

Social Welfare under Oligopoly: Does the Strengthening of Competition in Production Increase Consumers' Well-Being?

16:05 – 16:30 **Igor Bykadorov**, Andrea Ellero, Stefania Funari, Sergey Kokovin and Pavel Molchanov

Painful Birth of Trade under Classical Krugman's Monopolistic Competition

DGA-3: room 309

Dynamic Games and Applications - 3

Chair – Leon Petrosyan

14:00 – 14:25 **Ershov Dmitriy**

Non-negative IDP in differential game of limited resource extraction

14:25 – 14:50 **Yin Li**

Dynamic Shapley Value for 2-stage cost sharing game with spanning tree

14:50 – 15:15 Mario Alberto Garcia-Meza and **Maria Nastych**

A non-cooperative differential game of advertising goodwill: application to the real estate market of St Petersburg

15:15 – 15:40 **Ekaterina Gromova** and **Anna Tur**

On a Differential Game of Pollution Control with Random Terminal Instants

15:40 – 16:05 Stewart John Blakeway, **Ekaterina Gromova**, Dmitry Gromov, Anna Kirpichnikova and Nikolay Timonin
A dynamic game on a mobile ad-hoc network

16:05 – 16:30 **Leon Petrosyan**
Construction of Strongly Time-Consistent Subcore in Dynamic Games

NGA-1: room 209

Networking Games and Applications -1

Chair – Vladimir Mazalov

14:00 – 14:25 Vladimir Matveenکو, Alexei Korolev and **Anastasia Alfimova**
On dynamic stability of equilibrium in network game with production and externalities

14:25 – 14:50 **Hongwei Gao, Han Qiao, Shou-Yang Wang** and Meng-Ke Zhen
The algorithm and model of pairwise stable networks

14:50 – 15:15 **Nikolay Bazenkov** and Vsevolod Korepanov
Farsighted network formation with locally-informed players

15:15 – 15:40 **Elena Parilina** and **Artem Sedakov**
Stable Cooperation in a Game with a Major Player

15:40 – 16:05 **Maria Bulgakova** and Leon Petrosyan
Cooperation and pairwise stability in networks

16:05 – 16:30 **Vladimir Mazalov**, Tatyana Perol and Julia Tokareva
Game-theoretic centrality measures for analysis of academic web space

16:30 – 16:50 COFFEE BREAK, room 307

16:50 – 19:00 **F3: PARALLEL SESSIONS**

GTMA-2: room 410

Game Theory and Management Applications - 2

Chair – Victor Zakharov

16:50 – 17:15 Ekaterina Zaytseva and **Margarita Gladkova**
Cooperation and coordination in movie value chain

17:15 – 17:40 **Natalia Aizenberg** and Elena Stashkevich
Effective pricing scheme on the retail electricity market for the different types of consumers

17:40 – 18:05 **Alexey Soloviev**

Minimax estimation of Value-at-Risk under hedging of American contingent claims on a discrete financial market

18:05 – 18:30 **Nikolaos Chrysanthopoulos** and George Papavassilopoulos

A step closer to competition: A different concept of Cournot duopoly under incomplete information

18:30 – 18:55 **Victor Zakharov**, Alexander Krylatov and **Ivan Popov**

Competitive Energy Consumption under Transmission Constraints

CGA-2: room 209

Cooperative Games and Applications -2

Chair – Elena Lezhnina

16:50 – 17:15 **Aleksei Kondratev**

The preference aggregation rule as the Shapley value for a cooperative game of candidates

17:15 – 17:40 Gustavo Bergantiños, **Alfredo Valencia-Toledo** and Juan Vidal-Puga

Consistency in PERT problems

17:40 – 18:05 **Vasilij Gusev**

The vectors of Shapley, Owen, and Aumann-Dreze in the game patrolling with coalitional structure

18:05 – 18:30 **Elena Lezhnina**

Approach for comparing the values of cooperative games

18:30 – 18:55 **Sergei Dotsenko**

On a Housekeeper Cooperative Game

Saturday, July 09

09:30 – 10:00 COFFEE, room 307

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

Chair – Anna Rettieva

Alexander Tarasyev, Institute of Mathematics and Mechanics, RAS,
Ekaterinburg (Russia)

*Decompositional Algorithms for Construction of Control Strategies
in Dynamic Games*

11:10 – 12:10 **S1: PARALLEL SESSIONS**

SGE: room 209

Stochastic Games and Equilibrium

Chair – Dmitrii Lozovanu

11:10-11:30 **Julia Chirkova**

Optimal Arrivals to a Two-server Loss System with Random Access

11:30-11:50 **Victor Rozen**

*Situations of tr -equilibrium in antagonistic games with ordered
outcomes*

11:50-12:10 **Dmitrii Lozovanu** and Stefan Pickl

*An Approach for Determining the Optimal Strategies in Average
Antagonistic Stochastic Games*

CSC: room 410

Collaborative Supply Chain

Chair – Max van Dijk

11:10 – 11:30 **Anastasiia Ivakina** and **Ekaterina Zenkevich**

Supply chain cooperation modeling: trends and gaps

11:30 – 11:50 **Yulia Lonyagina** and Nikolay Zenkevich

*Nash Equilibrium and Bargaining Solution in Multi-Echelon
Distributive Supply Chains with Linear Demand*

11:50 – 12:10 **Max van Dijk**

*Cross-Border Collaboration in European-Russian Supply Chains:
Integrative Approach of Provision on Design, Performance and
Impediments*

12:20 – 14:00 LUNCH

13:30 – 14:00 COFFEE, room 307

14:00 – 16:30 **S2: PARALLEL SESSIONS**

GTMA-3: room 410

Game Theory and Management Applications - 3

Chair – Michele Dell'Era

14:00 – 14:25 **Maksim Shlegel**

Coopetition game with a coordinator

14:25 – 14:50 **Maryam Esmaeili**

A signaling advertising model between an intelligent consumer and two e-tailers

14:50 – 15:15 **Anastasiia Koroleva**

Stability assessment of Volkswagen's Chinese joint ventures

15:15 – 15:40 **Michele Dell'Era**

Talking to Influence

15:40 – 16:05 **Andrey Zyatchin**

Cost Allocation and Coalition Structure in the Vehicle Routing

NGA-2: room 209

Networking Games and Applications -2

Chair – Elena Gubar

14:00 – 14:25 **Pierre Von Mouche**

On the New Approach of Coalition Formation

14:25 – 14:50 **Svetlana Tarashnina and Nadezhda Smirnova**

Some excess-based solutions in the game "The landowner and his serfs"

14:50 – 15:15 **Yaroslavna Pankratova and Svetlana Tarashnina**

On a dynamic traveling salesman problem

15:15 – 15:40 **Vladislav Taynitskiy and Elena Gubar**

Optimal program of resistance to propagation of malwares in computer networks

15:40 – 16:05 **Elena Gubar, Ekaterina Zhitkova and Suriya Kumacheva**

Optimal behavior in the evolutionary model of spreading information about tax audits

16:10 – 16:30 COFFEE BREAK, room 307

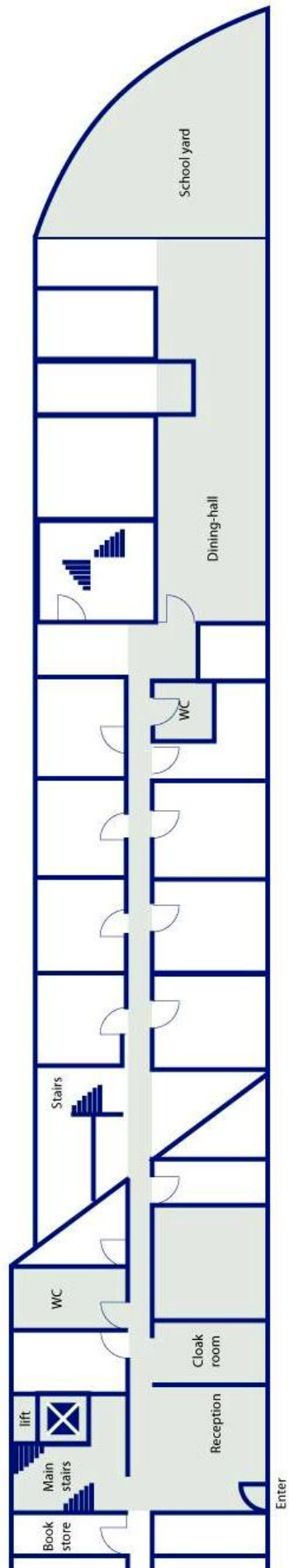
16:30 – 17:00 **CLOSING SESSION: GRAND HALL, room 309**
Chair – Leon Petrosyan

19:00 – 22:00 **CONFERENCE BANQUET³**

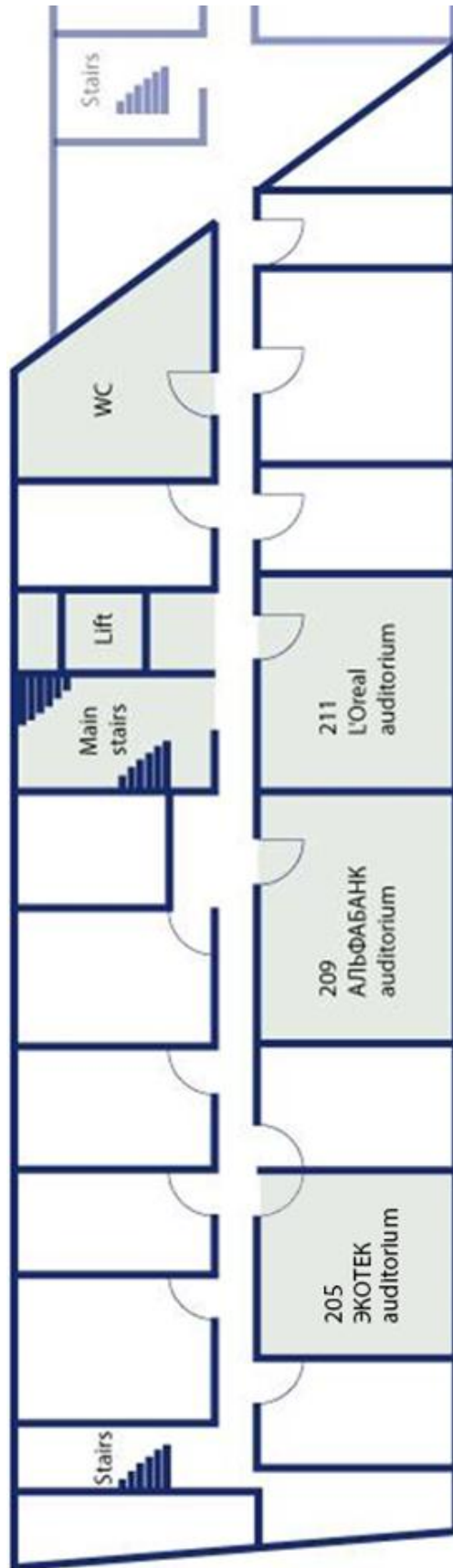


³Conference banquet will be held at Restaurant “Academia”

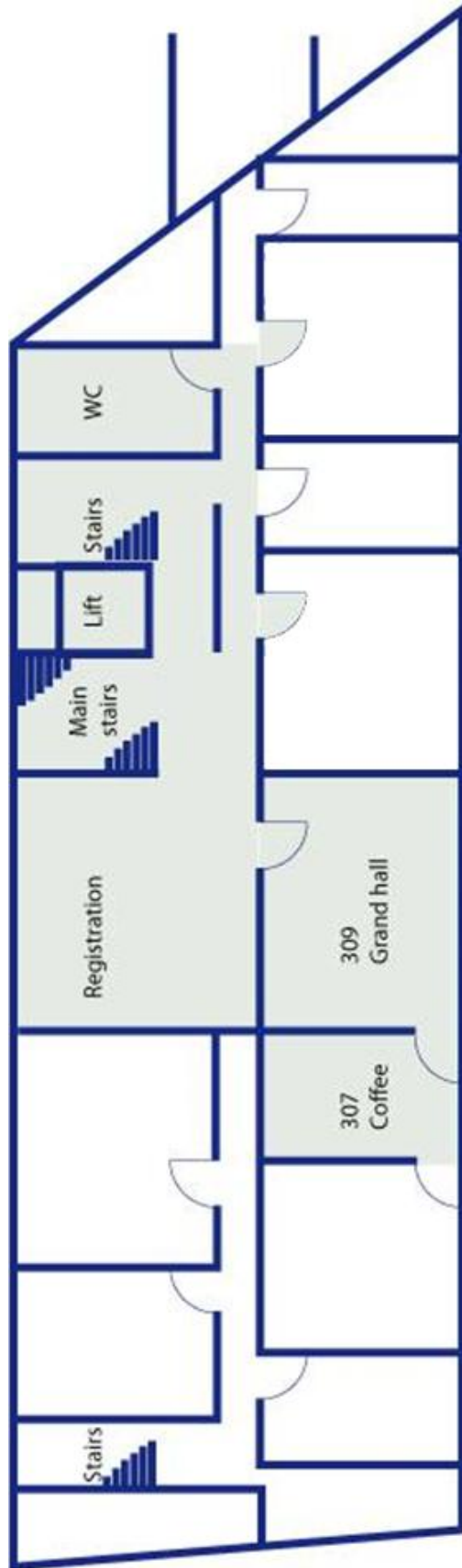
First floor



Second floor



Third floor



Fourth floor

