

The Eleventh International Conference  
**Game Theory and Management**

28-30 June, 2017  
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  
Volkhovskiy 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); Sergiu Hart  
(Israel); Steffen Jørgensen (Denmark); Ehud Kalai (USA); Andrea Di  
Liddo (Italy); Vladimir Mazalov (Russia); Shigeo Muto (Japan); Richard  
Staelin (USA); Krzysztof Szajowski (Poland); Myrna Wooders (UK);  
David W.K. Yeung (HongKong); Georges Zaccour (Canada); Paul  
Zipkin (USA)

# Program

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

<b>Wednesday, June 28</b>		
08:45 – 09:45	<b>REGISTRATION</b>	3 <sup>rd</sup> floor
08:45 – 09:45	COFFEE	Room 307
09:45 – 10:00	<b>WELCOME ADDRESS</b>	Room 309
10:00 – 11:00	<b>PLENARY TALK (1)</b>	Room 309
11:10 – 12:10	<b>PLENARY TALK (2)</b>	Room 309
12:10 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:30	<b>PARALLEL SESSIONS (W1)</b>	Room 315, 410
16:30 – 16:50	COFFEE BREAK	4 <sup>th</sup> floor
16:50 – 19:00	<b>PARALLEL SESSIONS (W2)</b>	Room 315, 410
19:00 – 22:00	<b>WELCOME PARTY</b>	Room 403
<b>Thursday, June 29</b>		
09:30 – 10:00	COFFEE	Room 307
10:00 – 11:00	<b>PLENARY TALK (3)</b>	Room 309
11:10 – 12:10	<b>PLENARY TALK (4)</b>	Room 309
12:10 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:30	<b>PARALLEL SESSIONS (T1)</b>	Room 315, 408, 410
16:30 – 16:50	COFFEE BREAK	Room 307
16:50 – 19:00	<b>PARALLEL SESSIONS (T2)</b>	Room 315, 410
<b>Friday, June 30</b>		
09:30 – 10:00	COFFEE	Room 307
10:00 – 11:00	<b>PLENARY TALK (5)</b>	Room 309
11:10 – 12:10	<b>PARALLEL SESSIONS (F1)</b>	Room 315, 410
12:10 – 14:00	LUNCH	University Center
13:30 – 14:00	COFFEE	Room 307
14:00 – 16:10	<b>PARALLEL SESSIONS (F2)</b>	Room 315, 410
16:20 – 16:40	<b>CLOSING SESSION</b>	Room 309
16:40 – 17:20	COFFEE BREAK	Room 307
19:00 – 22:00	<b>CONFERENCE BANQUET</b>	Restaurant “Academia”

## Wednesday, June 28

08:45 – 09:45 REGISTRATION, 3<sup>d</sup> floor

08:45 – 09:45 COFFEE, room 307

09:45 – 10:00 **WELCOME ADDRESS. GRAND HALL, room 309**

Co-chairs – Leon Petrosyan and Nikolay Zenkevich

10:00 – 11:00 **PLENARY 1. GRAND HALL, room 309**

Chair – Leon Petrosyan

**Matthew Jackson**, Stanford University (USA)

*The friendship paradox and systematic biases in perceptions and social norms: an implication of games on networks*

11:10 – 12:10 **PLENARY 2. GRAND HALL, room 309**

Chair – Vladimir Mazalov

**Christos Papadimitriou**, University of California at Berkeley (USA)

*Nash equilibrium and learning dynamics*

12:10 – 14:00 LUNCH<sup>1</sup>

13:30 – 14:00 COFFEE, room 307

14:00 – 16:30 **W1: PARALLEL SESSIONS**

**DGA-1: room 410**

**Dynamic Games and Applications - 1**

Chair – Anatolii Kleimenov

14:00 – 14:25 **Nikolay Krasovskii** and Alexander Tarasyev

*Equilibrium trajectories in dynamical bimatrix games with discounted integral payoffs*

14:25 – 14:50 **Ekaterina Rzhevskaya**

*Problem of connectivity in some graph searching problems*

14:50 – 15:15 **Ekaterina Kolpakova**

*A construction of Nash equilibrium based on system of Hamilton-Jacobi PDEs of special type*

15:15 – 15:40 **Yurii Averboukh**

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

*Near optimal strategy for many agent control problem with mean field interaction*

15:40 – 16:05 **Jose Daniel Lopez-Barrientos**, Beatris Adriana Escobedo-Trujillo and Hector Jasso-Fuentes

*Blackwell-Nash equilibria in zero-sum stochastic differential games*

16:05 – 16:30 **Anatolii Kleimenov**

*An approach to the construction of solutions of the non-antagonistic positional differential game.*

### **ELE: room 315**

#### **Evolution, Learning and Experiment**

Chair – Nicolas Klein

14:00 – 14:25 **Natalia Nikolchenko** and **Anastasia Lebedeva**

*Integrative approach to supply chain collaboration in distribution networks: impact on firm performance*

14:25 – 14:50 **Dmitriy Ershov**

*The Shapley Value in three-player dynamic resource extraction game*

14:50 – 15:15 Ryo Kawasaki, Hideo Konishi and **Junki Yukawa**

*A Finite Bottleneck Game with Homogeneous Commuters*

15:15 – 15:40 **Anastasiia Ivakina** and Nikolay Zenkevich

*Supply network working capital coordinating*

15:40 – 16:05 **Vsevolod Korepanov**

*Experiments on the influence of strategic thinking models on resource allocation mechanisms*

16:05 – 16:30 **Nicolas Klein**

*Learning in a game of strategic experimentation with three-armed exponential bandits*

16:30 – 16:50 COFFEE BREAK, 4<sup>th</sup> floor

16:50 – 19:00 **W2: PARALLEL SESSIONS**

### **CGA-1: room 315**

#### **Cooperative Games and Applications -1**

Chair – Valery Vasil'ev

16:50 – 17:15 **Leon Petrosyan**

*New characteristic functions for stochastic games*

17:15 – 17:40 **Natalia Naumova**

*Reactive bargaining sets for games with restricted cooperation*

17:40 – 18:05 **Nadezhda Smirnova, Svetlana Tarashnina and Yaroslavna Pankratova**

*Constructive and blocking power in glove market games*

18:05 – 18:30 **Valery Vasil'ev**

*Fuzzy core equivalence in multi-regional economic systems*

**DGA-2: room 410**

**Dynamic Games and Applications -2**

Chair – Agnieszka Wiszniewska-Matyszkiewicz

16:50 – 17:15 Nina Subbotina and **Evgenii Krupennikov**

*Solutions of inverse problems in nonantagonistic differential games*

17:15 – 17:40 **Anna Rettieva**

*Equilibria in discrete-time dynamic multicriteria games with finite horizon*

17:40 – 18:05 **Igor Shevchenko**

*Strategies to minimize distance to the real target*

18:05 – 18:30 **Dmitry Khlopin**

*On Tauberian theorems and game value maps*

18:30 - 18:55 Rajani Singh and **Agnieszka Wiszniewska-Matyszkiewicz**

*Linear quadratic game of exploitation of common renewable resources with inherent constraints*

19:00 – 22:00 WELCOME PARTY<sup>2</sup>

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<sup>2</sup> Welcome party will be held at the room 403, 4<sup>th</sup> floor

## Thursday, June 29

09:30 – 10:00 COFFEE, room 307

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

Chair – Ekaterina Gromova

**Vassili Kolokoltsov**, University of Warwick (UK)

*Evolutionary and mean-field game modeling of cyber-security, inspection and corruption, counter-terrorist measures, coalition building and network growth*

11:10 – 12:10 **PLENARY 4. GRAND HALL, room 309**

Chair – Nikolay Zenkevich

**Rida Laraki**, University Paris Dauphine (France)

*Majority judgment versus majority rule*

12:10 – 14:00 LUNCH

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

**GTMA-1: room 410**

**Game Theory and Management Applications - 1**

Chair – Igor Bykadorov

14:00 – 14:25 **Natalia Aizenberg**, Igor Bykadorov and Sergey Kokovin

*Beneficial welfare impact of bilateral tariffs under monopolistic competition*

14:25 – 14:50 Olga Gorbaneva and **Guennady Ougolnitsky**

*Static game theoretic models of coordination of private and public interests in economic systems*

14:50 – 15:15 **Alexander Sidorov**, Mathieu Parenti and Jacques-Francois Thisse

*Bertrand meets Ford: Is this for Good or for Bad for Consumers?*

15:15 – 15:40 **Dominik Welter** and Stefan Napel

*Responsibility-based allocation of cartel damages*

15:40 – 16:05 **Nikolay Bazenkov**, Maria Kuznetsova and Marina Sandomirskaja

*Who competes with whom in the Internet: analysis of price dispersion*

16:05 – 16:30 **Igor Bykadorov**, Andrea Ellero, Stefania Funari, Sergey Kokovin and Pavel Molchanov  
*Negative Pro-Competitive Effects of Trade under Monopolistic Competition*

**DGA-3: room 315**

**Dynamic Games and Applications - 3**

Chair – Ekaterina Gromova

14:00 – 14:25 **Ekaterina Gromova**, **Anastasiya Malakhova** and Arsen Palestini  
*Payoff distribution in a multi-company extraction game with uncertain duration*

14:25 – 14:50 **Ovanes Petrosian** and Maria Nastych  
*Looking forward approach in cooperative differential games with non-transferable utility*

14:50 – 15:15 **Vladislav Taynitskiy** and **Elena Gubar**  
*Impulse control in bi-virus epidemic models*

15:15 – 15:40 **Elena Gubar**, **Suriya Kumacheva** and Ekaterina Zhitkova  
*Evolution of risk-statuses in a model of tax control*

15:40 – 16:05 **Denis Fedyanin**  
*On information control in dynamic epistemic logic game found by reflexing methods*

16:05 – 16:30 **Taisiia Plekhanova**, **Ekaterina Gromova**, **Anna Kirpichnikova** and Stewart Blakeway  
*A multistage game of mobile agents' placement on a hexagonal grid - MANET*

**NGA: room 408**

**Networking Games and Applications**

Chair – Vladimir Matveenko

14:00 – 14:25 Alexander Krylatov, **Anastasiya Shirokolobova** and Victor Zakharov  
*Dual formulation of competitive traffic assignment problem*

14:25 – 14:50 **Elena Parilina** and **Vladimir Bure**

*Stochastic models of data transmission with specific network topologies*

14:50 – 15:15 **Aleksei Kondratev**

*Nash-stable community structures in collaboration network*

15:15 – 15:40 Chiu Yu Ko and **Duozhe Li**

*Decentralized one-to-many bargaining*

15:40 – 16:05 **Duozhe Li** and Quan Wen

*Decentralized network bargaining with endogenous matching*

16:05 – 16:30 **Vladimir Matveenko**, Alexei Korolev and Maria Zhdanova

*Game equilibria and dynamics of unification in production networks with nonhomogeneous players*

16:30 – 16:50 COFFEE BREAK, room 307

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

**GTMA-2: room 410**

**Game Theory and Management Applications - 2**

Chair – Alexander Vasin

16:50 – 17:15 **Marko Budler** and Peter Trkman

*Game-theoretic reasoning in business model approach to supply chain management*

17:15 – 17:40 **Nikolaos Chrysanthopoulos**, Panagiotis Kontogiorgos, George Skiadopoulos and Nikolaos Kakogiannis

*Optimal energy saving actions in a restructuring game for a domestic buildings energy market*

17:40 – 18:05 **Anton Bakuteyev**

*Game theory approach to water demand peak reduction*

18:05 – 18:30 **Alexander Vasin**, Valentin Kirillov and Anastasiia Divtsova

*Conditions for stable agreement on limitation of transboundary atmospheric pollution*

18:30 – 18:55 **Andrey Zyatchin** and Alina Kupetskaia

*Game-theoretic approach to economic order quantity model*

**CGA-2: room 315**

**Cooperative Games and Applications -2**

Chair – Anna Khmelnitskaya

16:50 – 17:15 **Artem Sedakov**

*Characteristic functions in linear oligopoly TU-games*

17:15 – 17:40 **Elena Lezhnina, Victor Zakharov and Viacheslav Shirokih**

*Coalition-formation problem for cooperative inventory routing game*

17:40 – 18:05 **Yin Li**

*Construction of strongly time-consistent subcore for irreducible networks*

18:05 – 18:30 **Maria Bulgakova**

*One special class of cooperative dynamic network games*

18:30 – 18:55 **Anna Khmelnitskaya, Gerard van der Laan and Dolf Talman**

*Centrality rewarding Shapley and Myerson values for undirected graph games*

## Friday, June 30

09:30 – 10:00 COFFEE, room 307

10:00 – 11:00 **PLENARY 5. GRAND HALL, room 309**

Chair – Anna Rettieva

**Krzysztof Szajowski**, Technical University of Wroclaw (Poland)

*Multilateral non-homogeneous stopping models*

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

**SGM: room 315**

**Stochastic Games and Mechanisms**

Chair – Nikolay Korgin

11:10-11:30 **Dmitrii Lozovanu** and Stefan Pickl

*On the existence of stationary Nash equilibria in finite state space average stochastic games*

11:30-11:50 Peter Duersch, **Marco Lambrecht** and Joerg Oechssler

*Measuring skill and chance in games*

11:50-12:10 **Nikolay Korgin**

*Incentive compatibility of Nash mechanisms*

**CCNE: room 410**

**Coordination, Commitment and Nash Equilibrium**

Chair – Thomas Weber

11:10 – 11:30 **Jimmy Teng**

*Schelling point as a refinement of Nash equilibrium*

11:30 – 11:50 **Mikhail Lutsenko**

*Agents against the center*

11:50 – 12:10 **Thomas Weber**

*Quantifying commitment in Nash equilibria*

12:10 – 14:00 LUNCH

13:30 – 14:00 COFFEE, room 307

14:00 – 16:10 **F1: PARALLEL SESSIONS**

**GTMA-3: room 410**

**Game Theory and Management Applications – 3**

Chair – Vladimir Mazalov

14:00 – 14:25 **Julia Chirkova**

*Virtual Operators Competition in the Two-sided Market*

14:25 – 14:50 Pavel Konyukhonskiy, **Alexandra Olkhovik** and Anna Kuznetsova

*Game-theoretic modeling of higher education development in the situation of economic recession*

14:50 – 15:15 **Yulia Ibragimova**

*Identification of the probability model of preferences based on data from Spliddit.org*

15:15 – 15:40 **Anton Bondarev**

*Cooperative vs. non-cooperative approach to differential R&D game: Endogenous uncertainty as the new market inefficiency source*

15:40 – 16:10 Andrei Gurtov, Andrey Lukyanenko and **Vladimir Mazalov**

*Virtual operator market as a congestion game*

**MA: room 315**

**Modelling and Applications**

Chair – Victoria Kreps

14:00 – 14:25 **Henrique Zaidan** and Claudio Cristino

*Extended warranty: an approach via Stackelberg game*

14:25 – 14:50 Sukhee Batbileg, **Tungalag Natsagdorj**, Evgeniya Finkelstein, Alexander Gornov and Anton Anikin

*Four-person game and its application in economics*

14:50 – 15:15 **Enkhbat Rentsen**, Batbileg Sukhee, **Tungalag Natsagdorj**, Alexander Gornov and Anton Anikin

*Global optimization approach to nonzero sum N-person game*

15:15 – 15:40 **Victor Rozen**

*Some approaches to value concept in games with ordered outcomes*

15:40 – 16:10 **Victoria Kreps** and Misha Gavrilovich

*Decoding linear error-correcting codes. Application to games with incomplete information on both sides*

16:20 – 16:40 **CLOSING SESSION: GRAND HALL, room 309**

Chair – Leon Petrosyan

16:40 – 17:20 COFFEE BREAK, room 307

19:00 – 22:00 **CONFERENCE BANQUET<sup>3</sup>**

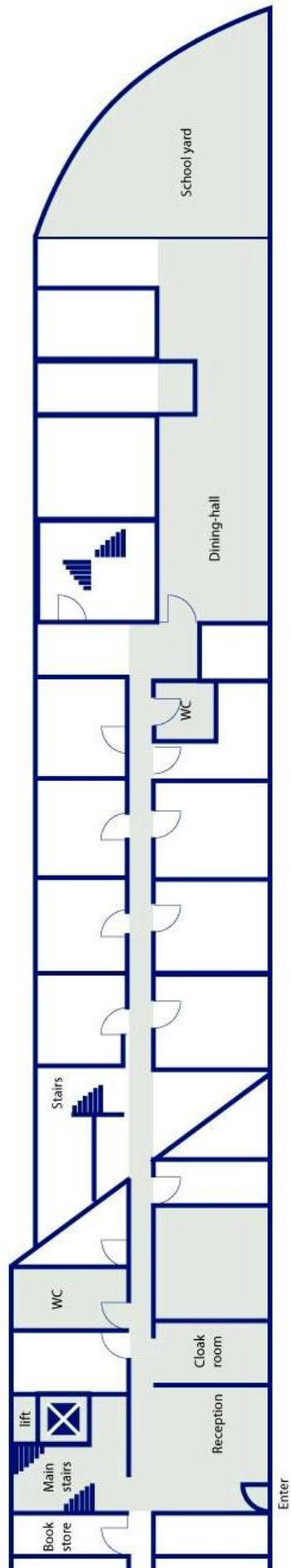
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<sup>3</sup>Conference banquet will be held at Restaurant “Academia”

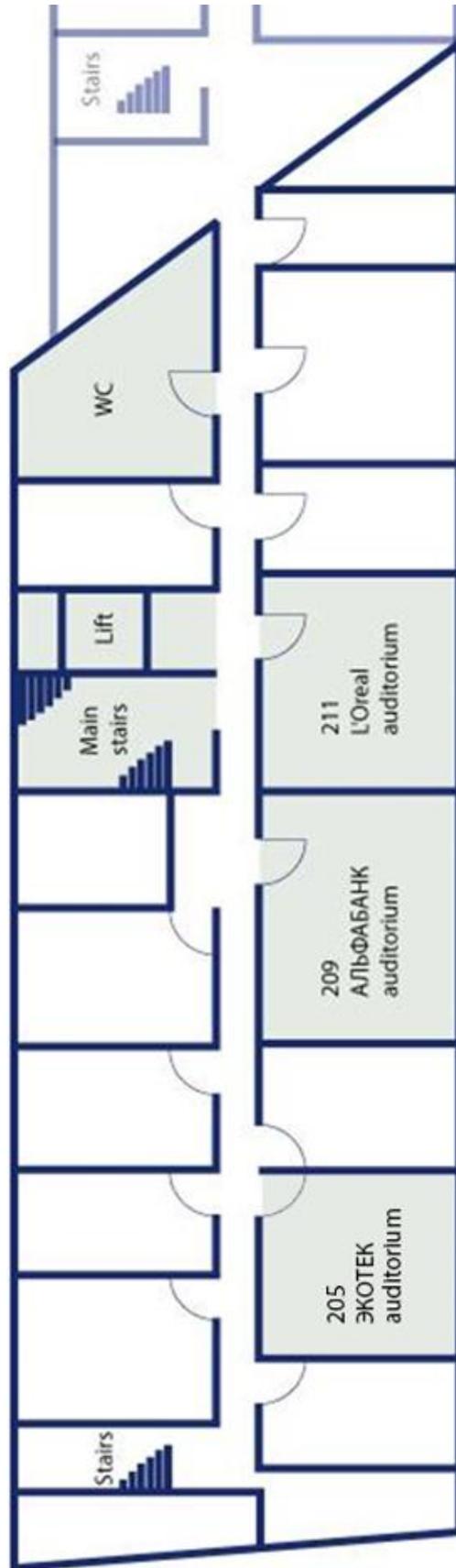
# Map



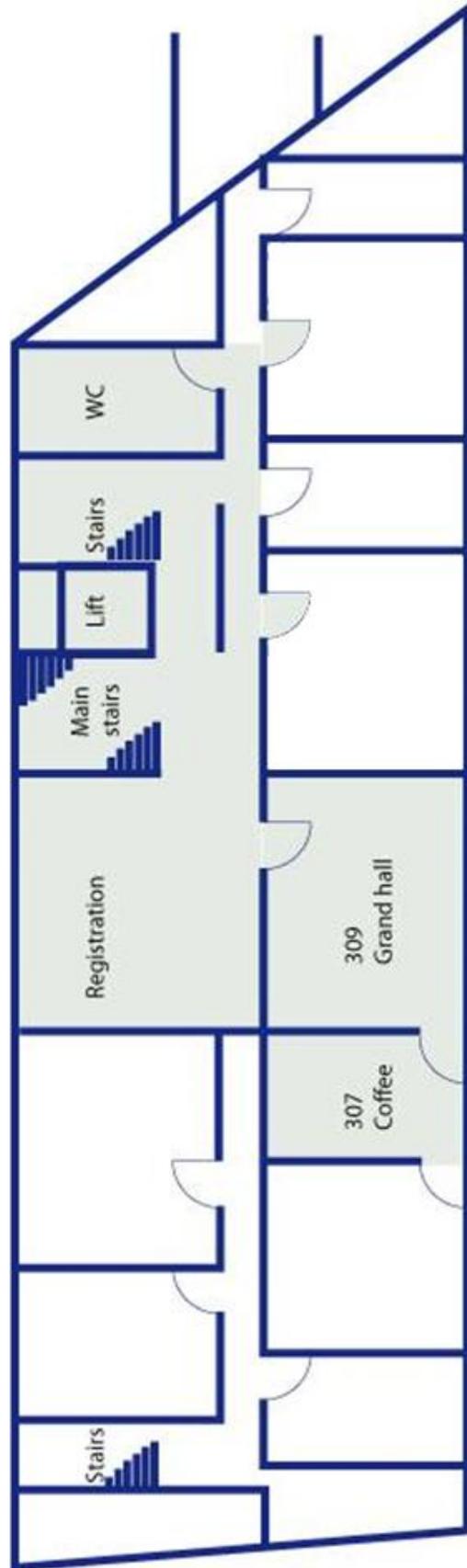
# First floor



## Second floor



## Third floor



**Fourth floor**

