

19th International Symposium on Dynamic Games and Applications July 25-28, 2022



INTERNATIONAL PROGRAM COMMITTEE

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Eitan Altman, France
Rabah Amir, USA
Joe Apaloo, Canada
Martino Bardi, Italy
Michèle Breton, Canada
Mark Broom, City, UK (co-chair)
Joel Brown, USA
João Correia da Silva, Portugal
Ross Cressman, University, Canada
Jozsef Garay, Hungary
Elena Gubar, Russia
Astrid Hilbert, Sweden
Anna Jaskiewicz, Poland
Vlastimil Krivan, Czech Republic
Peter Markowich, Saudi Arabia

Guiomar Martín-Herrán, Spain
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Leon Petrosyan, Russia
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Francisco Silva, France
Katerina Stankova, The Netherlands
Tristan Tomala, France
Corinne Touati, France
Georges Zaccour, Canada
Jorge Zubelli, Brazil

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Jorge Oviedo
Luis Quintas
Renato Soeiro
Carlos Ramos
Delfim F. M. Torres
Marta Cristina Vieira Faias Mateus

PLENARY SPEAKERS

Vivek Borkar, India
Arne Traulsen, Germany

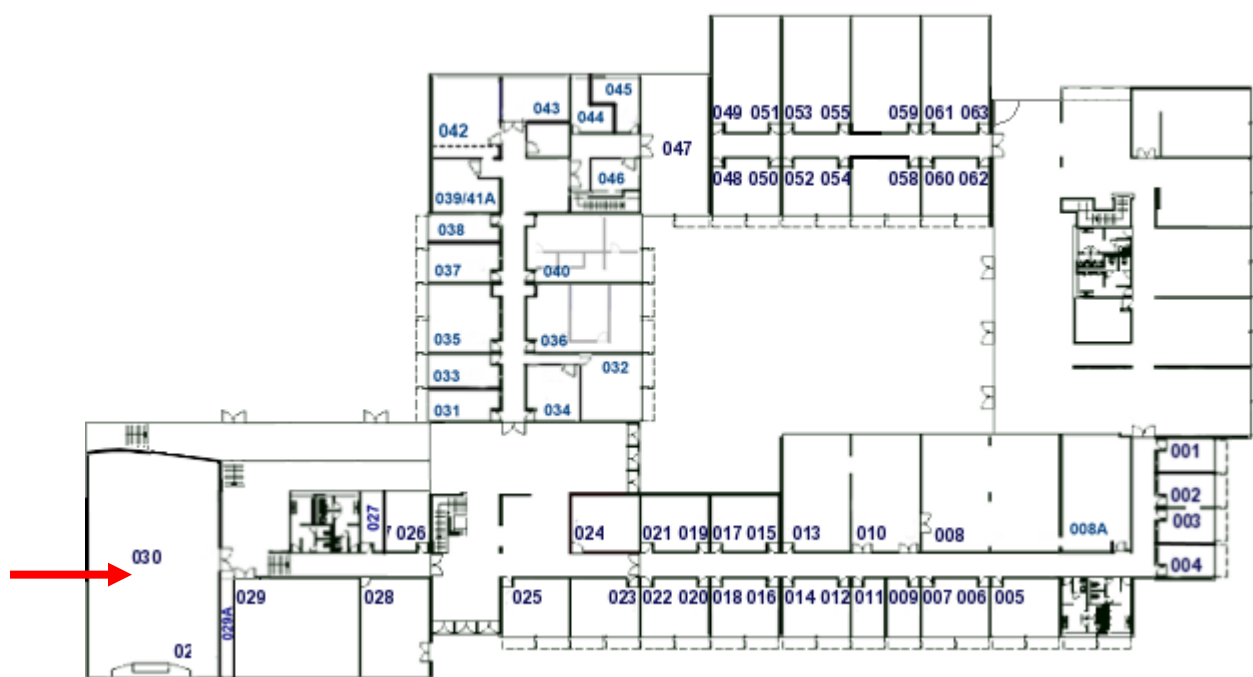
TUTORIALS

Margarida Carvalho, Canada
Thomas Lidbetter, USA

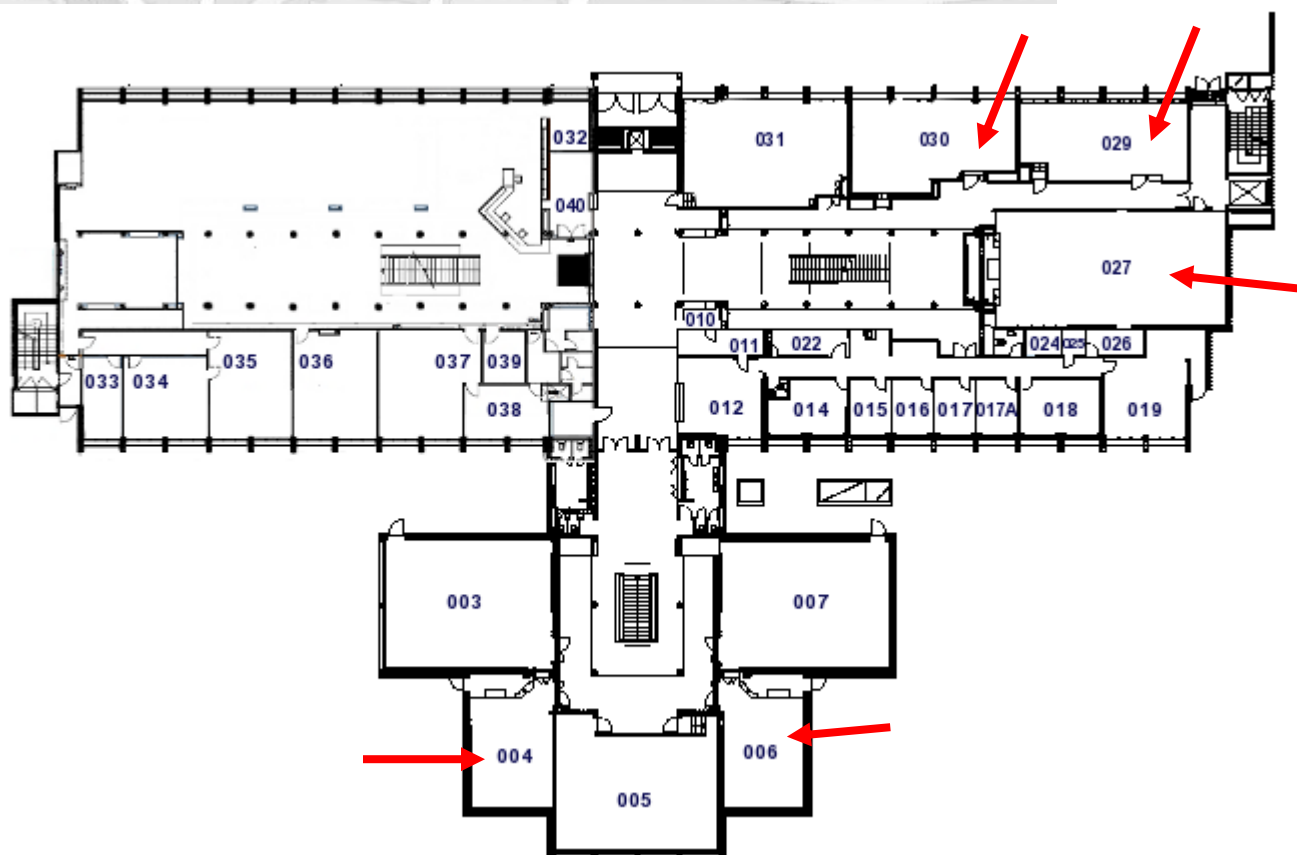
PRACTICAL INFORMATION

Conference Venue

Porto University
Edifício de Ciência de Computadores (FC6)



Edifício de Matemática (FC1)

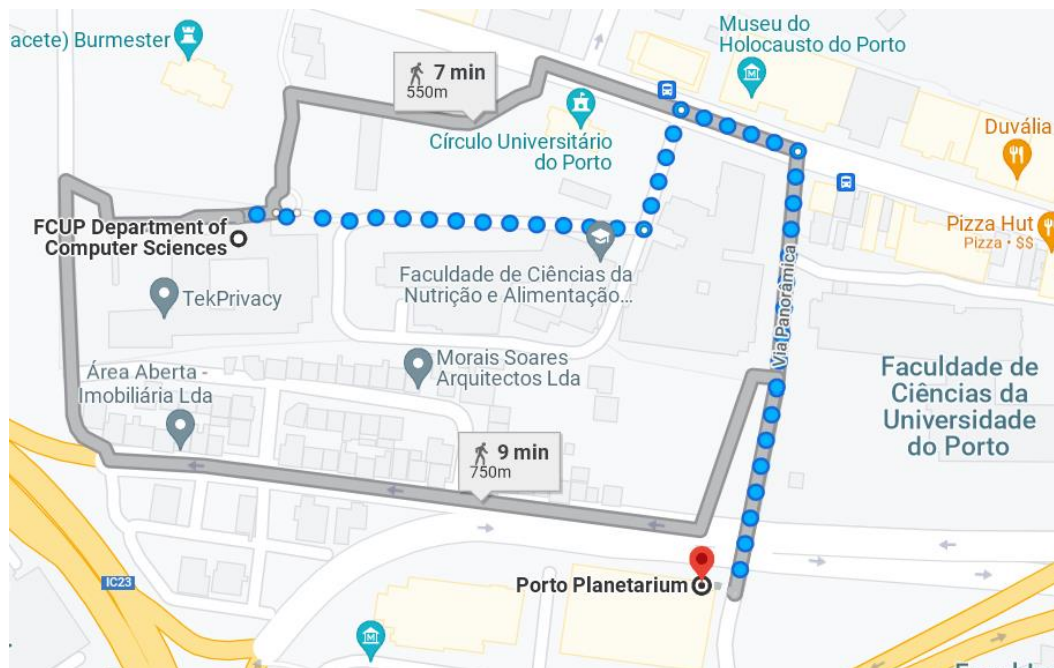
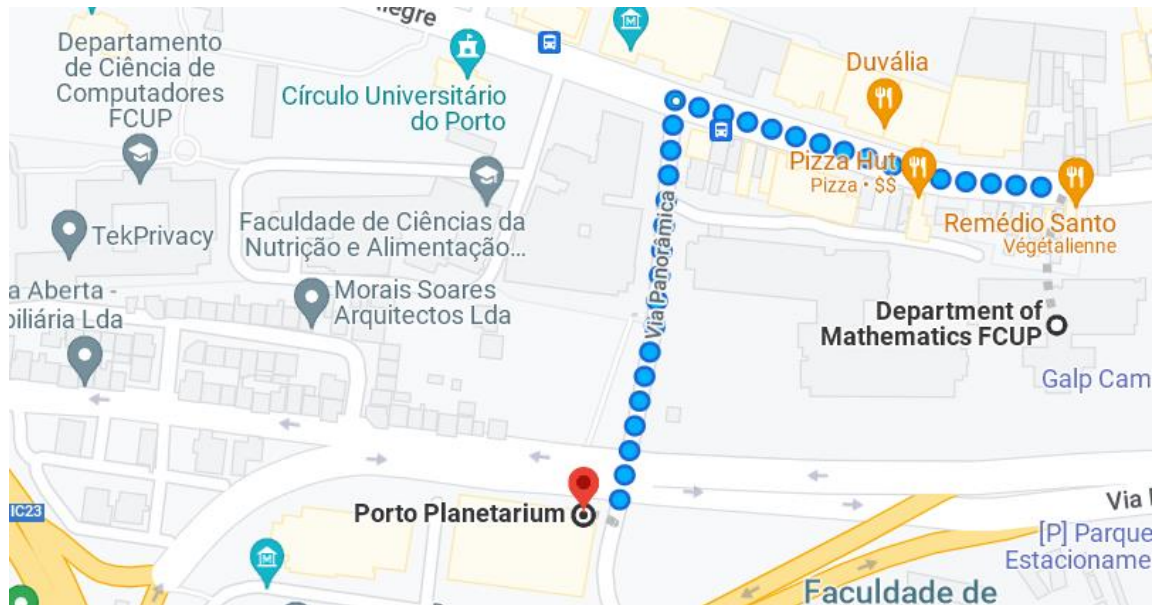


Coffee Breaks are at the bar of DM and FCUP.

The lunches, cocktail and farewell will be in the bar of the planetarium.

Planetário do Porto - Centro Ciência Viva
Rua das Estrelas, 4150-762 Porto
22 608 9800

Walking path between the venue of the conference, DM, FCUP, and the bar of the planetarium.



PROGRAM OVERVIEW

Mon, July 25		FC6 Edifício de Ciência de Computadores
FC6 030		
8:00 – 9:00	Registration	
9:00 – 9:15	Welcome address	
09:15 – 10:15	Plenary I Chair: Mark Broom Arne Traulsen <i>Stochastic evolutionary game dynamics in finite populations</i>	
10:15 – 10:45	Coffee Break	
10:45 – 12:15	Tutorial I Chair: Alberto Pinto Margarida Carvalho <i>Integer programming tools for games</i>	
12:15 – 14:00	Lunch	
14:00 – 15:30	Tutorial II Chair: Vladimir Mazalov Thomas Lidbetter <i>An introduction to search games</i>	
15:30 – 16:00	Coffee Break	
16:00 – 17:00	Plenary II Chair: Georges Zaccour Vivek Borkar <i>Some interesting dynamics motivated by reinforcement learning</i>	
17:05 – 18:00	General Assembly of ISDG All participants in the Symposium are welcome to attend	
18:30	Welcome Cocktail	

- MFG:** Mean Field Games
EG: Evolutionary Games
DGEM: Dynamic Games in Economics and Management
DGM: Dynamic Games Methodology
ERE: Environmental and Resource Economics
SPG: Search and Patrolling Game

Tue, July 26

FC1 Edifício de Matemática

	FC1 029	FC1 030	FC1 004	FC1 006
08:30 – 10:10	MFG 1 Chair: Silva Alvarez, F.J. Bonesini, O Mészáros, A.R. Lavigne, P Silva Alvarez, F.J.	EG 1 Chair: Stankova, K. Pires, D. Glynatsi, N. Chalub, F. Cressman, R.	DGEM 1 Chair: Navas, J. Cabo, F. Tidball, M. Mohamadichamgavi, J. Navas, J.	DGM 1 Chair: de Zeeuw, A. Petrosyan, L. Zaccour, G. Sedakov, A. de Zeeuw, A.
10:10 – 10:40	Break			
10:40 – 12:20	MFG 2 Chair: Firoozi, D. Mendico, C. Graber, J. Gutierrez, J. Firoozi, D.	EG 2 Chair: Apaloo, J. Ramirez, M.A. Murali, D. Schreiber, A. Couto, M.	DGEM 2 Chair: Petkov, V. Malladi, Suraj. Dragicevic, A. Sun, P. Petkov, V.	Young Scholar Presentations Chair: Broom, M. Bukkuri, A. Kouhkouh, H. Sadana, U.
12:20 – 14:00	Lunch			
14:00 – 15:40	MFG 3 Chair: Tonon, D. Ricciardi, M. Mazanti, G. Duisembay, S Tonon, D.	EG 3 Chair: Krivan, V. Aizouk, R. Gubar, E. Zubelli, J. Martins, J.	DGEM 3 Chair: Breton, M. Li, Y. Stępnia, P. Bajoori, E. Breton, M.	DGM 2 Chair: Parilina, E. Ramos, C. de la Cruz, O. Ballester Granell, M.A. Parilina, E.
15:40 – 16:10	Break			
16:10 – 17:50	MFG 4 Chair: Gomes, D. Marzufero, L. Calzola, E. Gomes, D.	EG 4 Chair: Cressman, R. Stankova, K, Apaloo, J. Salvioli, M. Brown, J.	DGEM 4 Chair: Pinto, A. Baha, A. Soeiro, R. Almeida, J.P. Pinto, A.	DGM 3 Chair: Wagener, F. Matychyn, I. Ramsey, D. Wagener, F.

Wed, July 27				
FC1 Edificio de Matemática				
	FC1 029	FC1 030	FC1 004	FC1 006
09:00 – 10:40	MFG 5 Chair: Basar, T. Muhindo, S.M. Daudin, S. Vasileiadis, A. Basar, T.	EG 5 Chair: Brown, J. Vincent, T. Scaramangas, A. McNickle, G. Gokhale, C.	DGEM 5 Chair: Buratto, A. De Giovanni, P. Lu, L. Fakhrabadi, M. Buratto, A.	DGM 4 Chair: Turova, V. Von Moll, A. Turetsky, V. Mazalov, V. Turova, V.
10:40 – 11:10	Break			
11:10 – 12:50	MFG 6 Chair: Cirant, M. Ferreira, R. Mimikos-Stamatopoulos, M. Firoozi, D. Cirant, M.	EG 6 Chair: Broom, M. Bayer, P. Wu, Z. Gubar, E. Accinelli, E.	ERE 1 Chair: Sbragia, L. Pajaq, M De Giovanni, D. Alberdon, J. Sbragia, L.	
13:00 – 14:00	Meeting of the Executive Board of ISDG			
Afternoon	Visit to a Porto Cellar: Details to come later			
19:00	Symposium Dinner			

Thu, July 28				
FC1 Edificio de Matemática				
	FC1 029	FC1 030	FC1 004	FC1 006
09:00 – 10:40	MFG 7 Chair: Malhamé, R. Ghilli, D. Séguret, A. Festa, A. Malhamé, R.	EG 7 Chair: Gubar, E. Sacco, A. Argasinski, K. Krivan, V. Broom, M.	ERE 2 Chair: Martín-Herrán, G. de Frutos Cachorro, J. Morales, J.R. Mañó-Cabello, C. Wiszniewska-Matyszkiew, A.	SPG 1 Chair: Angelopoulos, S. Zeng, L. Brethouwer, J.T. Lidbetter, T. Angelopoulos, S.
10:40 – 11:10	Break			
11:10 – 12:25	Stochastic Games Chair: Kleshnina, M. Szajowski, K. Palmowski, Z. Kleshnina, M.	Microeconomic Agents Chair: Álvarez-López, A.A. Sérgio, N. Martín García, R. Álvarez-López, A.A.	ERE 3 Chair: Chenavaz, R. Zaccour, G. Chenavaz, R.	SPG 2 Chair: Lidbetter, T. Clarkson, J. Fokkink, R. Papadaki, K.
12:25 – 14:00	Lunch			
14:00 – 15:30	Isaacs Awards Presentations Room: FC1 027			
15:30 – 16:30	Farewell drinks			

DETAILED PROGRAM

July 25, 2022

09:00 AM Welcome address

Plenary I

Location: FC6 Edifício de Ciência de Computadores
Chair: Broom, Mark

09:15 AM Stochastic evolutionary game dynamics in finite populations
Traulsen, Arne

10:15 AM Coffee Break

Tutorial I

Location: FC6 030 - FC6 Edifício de Ciência de Computadores
Chair: Pinto, Alberto

10:45 AM Integer programming tools for games
Carvalho, Margarida

12:15 PM Lunch

Tutorial II

Location: FC6 030 - FC6 Edifício de Ciência de Computadores
Chair: Mazalov, Vladimir

02:00 PM An introduction to search games
Lidbetter, Thomas

03:30 PM Coffee Break

Plenary II

Location: FC6 030 - FC6 Edifício de Ciência de Computadores
Chair: Zaccour, Georges

04:00 PM Some interesting dynamics motivated by reinforcement learning
Borkar, Vivek

05:05 PM General Assembly of ISDG

06:30 PM Welcome Cocktail

July 26, 202

MFG 1 Mean Field Games 1

Location: FC1 029 - FC1 Edifício de Matemática

Chair: Silva Alvarez, Francisco José

- 08:30 AM On correlated equilibria and mean field games in progressive strategies**
Bonesini, Ofelia; Campi, Luciano; Fischer, Markus
- 08:55 AM A variational approach to first order kinetic mean field games with local couplings**
Mészáros, Alpár R.
- 09:20 AM Generalized conditional gradient and learning in potential mean field games**
Lavigne, Pierre
- 09:45 AM Approximation of deterministic mean field games with control-affine dynamics**
Silva Alvarez, Francisco José; Gianatti, Justina

EG 1 Evolutionary Games 1

Location: FC1 030 - FC1 Edifício de Matemática

Chair: Stankova, Katerina

- 08:30 AM More can be Better: An analysis of single mutant fixation probability functions under 2x2 games**
Pires, Diogo; Broom, Mark; Erovenko, Igor
- 08:55 AM Reactive-n strategies of direct reciprocity**
Glynatsi, Nikoleta
- 09:20 AM From fixation probabilities to d-player games: an inverse problem in evolutionary dynamics**
Fabio, Chalub
- 09:45 AM Cooperation in Social Dilemmas with Opting Out**
Cressman, Ross; Krivan, Vlastimil

DGEM 1 Dynamic Games in Economics and Management 1

Location: FC1 004 - FC1 Edifício de Matemática

Chair: Navas, Jorge

- 08:30 AM Positional effects in public good provision. Strategic interaction and inertia**
Cabo, Francisco; Tidball, Mabel; Jean-Marie, Alain
- 08:55 AM Positional and conformist effects in public good provision. Strategic interaction and inertia**
Tidball, Mabel; Cabo, Francisco; Jean-Marie, Alain

- 09:20 AM** **Asymmetric investment in Public Goods Game according to the importance of agents in the population**
Mohamadichamgavi, Javad
- 09:45 AM** **Regime switching in dynamic games with hyperbolic discounting**
Navas, Jorge; Marin-Solano, Jesús

DGM 1 Dynamic Games Methodology 1

Location: FC1 006 - FC1 Edifício de Matemática
Chair: de Zeeuw, Aart

- 08:30 AM** **Characteristic Functions in Cooperative Differential Games on Networks**
Petrosyan, Leon; Pankratova, Yaroslavna
- 08:55 AM** **Payment Schemes for Sustaining Cooperation in Dynamic Games**
Zaccour, Georges; Parilina, Elena
- 09:20 AM** **Influence in social networks with stubborn agents: from competition to bargaining**
Kareeva, Yulia; Sedakov, Artem; Zhen, Mengke
- 09:45 AM** **Differential Games**
de Zeeuw, Aart
- 10:10 AM** **Break**

MFG 2 Mean Field Games 2

Location: FC1 029 - FC1 Edifício de Matemática
Chair: Firoozi, Dena

- 10:40 AM** **Asymptotic behavior of solutions to first-order mean field games.**
Mendico, Cristian
- 11:05 AM** **A link between some mean field games and conservation laws**
Graber, Jameson; Meszaros, Alpar
- 11:30 AM** **A Mean Field Game price formation model with common noise**
Gutierrez, Julian; Gomes, Diogo; Ribeiro, Ricardo
- 11:55 AM** **Optimal Design of Renewable Energy Certificate markets: A Principal-Agent Mean Field Game Approach**
Firoozi, Dena; Shrivats, Arvind; Jaimungal, Sebastian

EG 2 Evolutionary Games 2

Location: FC1 030 - FC1 Edifício de Matemática
Chair: Apaloo, Joseph

- 10:40 AM** **Chaos and noise: disorder in population dynamics**
Ramirez, Maria Alejandra; Traulsen, Arne

- 11:05 AM** **Stable stochastic games and population dynamics**
Murali, Divya; Rao, K. S. Mallikarjuna; Shaiju, A. J.
- 11:30 AM** **Sampling Dynamics and Stable Mixing in Hawk–Dove Games**
Arigapudi, Srinivas; Schreiber, Amnon; Heller, Yuval
- 11:55 AM** **Introspection dynamics: A simple model of counterfactual learning in asymmetric games**
Couto, Marta; Giaimo, Stefano; Hilbe, Christian

DGEM 2 Dynamic Games in Economics and Management 2

Location: FC1 004 - FC1 Edifício de Matemática
Chair: Petkov, Vladimir

- 10:40 AM** **An Economic Model of Prior-Free Spatial Search**
Malladi, Suraj
- 11:05 AM** **Stochastic Exchange Networks with Risk Sharing**
Dragicevic, Arnaud
- 11:30 AM** **Dynamic network formation with ordered partitioning and incomplete information**
Sun, Ping; Parilina, Elena
- 11:55 AM** **Recursive representation of dynamic intra-personal games of generalized hyperbolic discounters**
Petkov, Vladimir

Young Scholar Best Paper Award

Location: FC1 006 - FC1 Edifício de Matemática
Chair: Broom, Mark

- 10:40 AM** **Integrating Eco-Evolutionary Dynamics into Matrix Population Models for Structured Populations**
Bukkuri, Anuraag; Brown, Joel
- 11:05 AM** **Viscous ergodic Mean-Field Games in non-compact setting**
Kouhkouh, Hicham
- 11:30 AM** **Feedback Nash equilibria in differential games with impulse control**
Sadana, Utsav; Reddy, Puduru Viswanadha; Zaccour, Georges
- 12:20 PM** **Lunch**

MFG 3 Mean Field Games 3

Location: FC1 029 - FC1 Edifício de Matemática
Chair: Tonon, Daniela

- 02:00 PM** **The Master Equation in a Bounded Domain with Neumann Conditions**
Ricciardi, Michele
- 02:25 PM** **Minimal-time mean field games with state constraints**
Mazanti, Guilherme; Sadeghi Arjmand, Saeed
- 02:50 PM** **Particle approximation of one-dimensional Mean-Field-Games with local interactions**
Duisembay, Serikbolsyn
- 03:15 PM** **A comparison principle for Hamilton-Jacobi equations on infinite dimensional spaces**
Tonon, Daniela

EG 3 Evolutionary Games 3

Location: FC1 030 - FC1 Edifício de Matemática
Chair: Krivan, Vlastimil

- 02:00 PM** **The game-theoretical modelling of a dynamically evolving network: revisiting the target sequence 111**
Aizouk, Raneem; Broom, Mark
- 02:25 PM** **Analysis of epidemic waves in a two-virus SIRS model in a scale-free network**
Gubar, Elena; Tainitskiy, Vladislav
- 02:50 PM** **Estimating and forecasting epidemiological dynamics and public-health response with a spatiotemporal approach.**
Albani, Vinicius; Zubelli, Jorge
- 03:15 PM** **Evolutionary vaccination strategies for the reinfection SIRI model**
Martins, José; Pinto, Alberto

DGEM 3 Dynamic Games in Economics and Management 3

Location: FC1 004 - FC1 Edifício de Matemática
Chair: Breton, Michèle

- 02:00 PM** **Investigating the Asymmetric Behavior of Oil Price Volatility Using Support Vector Regression**
Hyunjoo Kim, Karlsson; Yushu, Li
- 02:25 PM** **Perpetual American cancellable options and Levy-type last passage times**
Stępniaak, Paweł; Palmowski, Zbigniew
- 02:50 PM** **Optimal delegated search with learning and no monetary transfers**
Bajoori, Elnaz; Wirtz, Julia
- 03:15 PM** **The impact of safety covenants in syndicated loan agreements**
Breton, Michèle; Nabassaga, Tigüene

DGM 2 Dynamic Games Methodology 2

Location: FC1 006 - FC1 Edifício de Matemática

Chair: Parilina, Elena

- 02:00 PM Nonlinearity, control and decision**
Ramos, Carlos
- 02:25 PM Hamilton and D'Hondt differences in the Spanish parliament context**
de la Cruz, Omar; Tomé Bermejo, Fernando; Ramiro Moreno, Rafael
- 02:50 PM Convergence conditions of market algorithms**
Ballester Granell, Miguel Ángel; Hernandez Rojas, Penélope
- 03:15 PM Sustainable Cooperation in Dynamic Games on Event Trees with Players' Asymmetric Beliefs**
Parilina, Elena; Zaccour, Georges
- 03:40 PM Break**

MFG 4 Mean Field Games 4

Location: FC1 029 - FC1 Edifício de Matemática

Chair: Gomes, Diogo

- 04:10 PM On a pursuit-evasion game between a single player and a population of agents**
Marzufero, Luciano; Bagagiolo, Fabio; Capuani, Rossana
- 04:35 PM A second order accurate Lagrange-Galerkin scheme for a class of Fokker-Planck equations and applications to Mean Field Games**
Calzola, Elisa; Carlini, Elisabetta
- 05:00 PM On weak strong uniqueness for mean-field games**
Gomes, Diogo; Rita, Ferreira; Vardan, Voskanyan

EG 4 Evolutionary Games 4

Location: FC1 030 - FC1 Edifício de Matemática

Chair: Cressman, Ross

- 04:10 PM Validating game-theoretic models of cancer and its treatment**
Stankova, Katerina
- 04:35 PM Multi-trait Model of Cancer Evolution showing Coadaptation between Aggressiveness and Co-option of Fibroblasts**
Apaloo, Joseph; Brown, Joel

- 05:00 PM** **Is the Success of Adaptive Therapy in Metastatic Castrate-Resistant Prostate Cancer Influenced by Cell-Type-Dependent Production of Prostate-Specific Antigen?**
Salvioli, Monica; Vandelaer, Len; Schneider, Katharina; Cavill, Rachel; Stankova, Katerina
- 05:25 PM** **Game Theory models significantly prolong response to Abiraterone in metastatic castrate resistant prostate cancer**
Brown, Joel; Zhang, Jingsong; Cunningham, Jessica J.; Gatenby, Robert

DGEM 4 Dynamic Games in Economics and Management 4

Location: FC1 004 - FC1 Edifício de Matemática

Chair: Pinto, Alberto

- 04:10 PM** **Dynamic monitoring of adaptive crime**
Baha, Alae
- 04:35 PM** **Shared subgame-perfect equilibria in price competition duopolies with network effects**
Soeiro, Renato; Pinto, Alberto
- 05:00 PM** **A Hotelling game in networks with uncertainty on costs**
Almeida, João P.
- 05:25 PM** **Cicles of corruption and democracy**
Pinto, Alberto; Oliveira, Bruno

DGM 3 Dynamic Games Methodology 3

Location: FC1 006 - FC1 Edifício de Matemática

Chair: Wagener, Florian

- 04:10 PM** **Game Problems for Fractional-Order Nonstationary Systems**
Matychyn, Ivan; Onyshchenko, Viktoriia
- 04:35 PM** **Game Theoretical Models of Choosing a Valuable Good in the Age of Big Data**
Ramsey, David
- 05:00 PM** **Differential games of public investment: Markovian best responses in the general case**
Jaakkola, Niko; Wagener, Florian

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MFG 5 Mean Field Games 5

Location: FC1 029 - FC1 Edifício de Matemática
Chair: Basar, Tamer

- 09:00 AM Optimal Control of the Fokker-Planck equation with state constraint in the Wasserstein Space**
Daudin, Samuel
- 09:25 AM Exploration Noise for learning Linear Quadratic Mean Field Games.**
Delarue, François; Vasileiadis, Athanasios
- 09:50 AM Incentive Designs for Stochastic Stackelberg Games in the High Population Regime**
Sanjari, Sina; Bose, Subhonmesh; Başar, Tamer

EG 5 Evolutionary Games 5

Location: FC1 030 - FC1 Edifício de Matemática
Chair: Brown, Joel

- 09:00 AM Darwin's finches and Darwinian dynamics: using evolutionary games to understand competitive pressures and ecological risks among co-occurring species.**
Vincent, Tania L.S.; Apaloo, Joseph
- 09:25 AM Ecological and evolutionary stability in Batesian mimicry systems**
Scaramangas, Alan; Broom, Mark
- 09:50 AM A model of plant community dynamics rooted in evolutionary game theory**
McNickle, Gordon; Halloway, Abdel
- 10:15 AM Leveraging Parrondo's paradox for sustainable agriculture**
Gokhale, Chaitanya

DGEM 5 Dynamic Games in Economics and Management 5

Location: FC1 004 - FC1 Edifício de Matemática
Chair: Buratto, Alessandra

- 09:00 AM Enhancing Visibility In Circular Economy Systems Through Blockchain Technology**
De Giovanni, Pietro
- 09:25 AM Dynamic Pricing and Advertising with Reference Price Effect When Envisioning Product-recall Crisis**
Lu, Lijue; Mukherjee, Arka

- 09:50 AM** **Multi-Period Stackelberg Game with Dynamic, Price-dependent, and Distributionally Robust Demand**
Fakhrabadi, Mahnaz; Sandal, Leif Kristoffer
- 10:15 AM** **A dynamic model for native advertising**
Grosset, Luca; Buratto, Alessandra; Brambilla, Chiara

DGM 4 Dynamic Games Methodology 4

Location: FC1 006 - FC1 Edifício de Matemática
Chair: Turova, Varvara

- 09:00 AM** **Turret Escape Differential Game**
Von Moll, Alexander; Fuchs, Zachariah; Shishika, Daigo; Maity, Dipankar; Dorothy, Michael; Pachter, Meir
- 09:25 AM** **Robust controllability of linear systems: extension to a non-scalarizable case**
Turetsky, Vladimir; Glizer, Valery Y.
- 09:50 AM** **Equilibrium in a queueing system with strategic users**
Mazalov, Vladimir; Chirkova, Julia
- 10:15 AM** **Nikolai Botkin's contribution to differential games**
Turova, Varvara
- 10:40 AM** **Break**

MFG 6 Mean Field Games 6

Location: FC1 029 - FC1 Edifício de Matemática
Chair: Cirant, Marco

- 11:10 AM** **A potential approach for planning mean-field games in one dimension**
Ferreira, Rita; Bakaryan, Tigran; Gomes, Diogo
- 11:35 AM** **Weak and renormalized solutions to a hypoelliptic Mean Field Games system.**
Mimikos-Stamatopoulos, Nikiforos
- 12:00 PM** **LQG Mean Field Games with Entropy Regularization**
Firoozi, Dena; Jaimungal, Sebastian
- 12:25 PM** **Stability in MFG, (a bit) beyond Lasry-Lions monotonicity**
Cirant, Marco

EG 6 Evolutionary Games 6

Location: FC1 030 - FC1 Edifício de Matemática
Chair: Broom, Mark

- 11:10 AM** **A Markovian decision model of adaptive cancer treatment and quality of life**
Bayer, Péter; Broom, Mark; Brown, Joel; Dubbeldam, Johan

- 11:35 AM** **Why Multilingual, and How to Keep It -- An Evolutionary Dynamics Perspective**
Wu, Zhijun
- 12:00 PM** **One evolutionary model of investment decision making**
Gubar, Elena; Gerschuk, Tatyana; Sánchez Carrera, Edgar J.
- 12:25 PM** **Evolution in a General Equilibrium framework**
Accinelli, Elvio; Muñiz, Humberto

ERE 1 Environmental and Resource Economics 1

Location: FC1 004 - FC1 Edificio de Matemática

Chair: Sbragia, Lucia

- 11:10 AM** **Two dynamic programming approaches for finding optimal and Nash equilibrium harvesting strategies in predator-prey systems**
Pająk, Michał; Ramsey, David
- 11:35 AM** **The optimal time to join an International Environmental Agreement**
De Giovanni, Domenico; Lamantia, Fabio
- 12:00 PM** **A Common Resource Game with Quasi-hyperbolic Discounting and Uncertainty**
Marin-Solano, Jesus; Alderborn, Joakim
- 12:25 PM** **Self-image and the Stability of International Environmental Agreements**
Sbragia, Lucia; Breton, Michèle

1:00 PM Meeting of the Executive Board of ISDG

July 28, 2022

MFG 7 Mean Field Games 7

Location: FC1 029 - FC1 Edificio de Matemática
Chair: Malhamé, Roland

- 09:00 AM** **A Mean Field Game model in Economics with spatial interactions in the human capital**
Ghilli, Daria
- 09:25 AM** **A mean field control approach for smart charging**
Séguret, Adrien
- 09:50 AM** **Hybrid control for optimal visiting problems**
Festa, Adriano
- 10:15 AM** **A quantitized mean field game for a dynamic demand-sensitive pricing problem**
Malhamé, Roland; Caines, Peter; Foguen-Tchuendom, Rinel

EG 7 Evolutionary Games 7

Location: FC1 030 - FC1 Edificio de Matemática
Chair: Gubar, Elena

- 09:00 AM** **A Binary Signal Model for Herding Behavior with Imprecise Probabilities**
Imma Lory, Aprea; Armando, Sacco
- 09:25 AM** **The replicator dynamics for state based and age structured game theoretic models**
Argasinski, Krzysztof
- 09:50 AM** **Considering interaction times leads to novel predictions in old models**
Krivan, Vlastimil; Cressman, Ross
- 10:15 AM** **Generalised social dilemmas: the evolution of cooperation in populations with variable group size**
Broom, Mark; Pattni, Karan; Rychtar, Jan

ERE 2 Environmental and Resource Economics 2

Location: FC1 004 - FC1 Edificio de Matemática
Chair: Martín-Herrán, Guiomar

- 09:00 AM** **Stackelberg competition in groundwater resources with multiple uses**
de Frutos Cachorro, Julia; Martín-Herrán, Guiomar; Tidball, Mabel
- 09:25 AM** **Transboundary pollution and New Economic Geography in a dynamic game framework**
Morales, José Rodolfo; Martín-Herrán, Guiomar; Martínez-García, María Pilar

- 09:50 AM** **Being Naïve or Sophisticated? Endogenous Growth, the Environment, Pollution and Non-Constant Discounting.**
Mañó-Cabello, Carles
- 10:15 AM** **Sharks, squalene and COVID vaccines - When a scarce renewable resource becomes strategic in short run**
Wiszniewska-Matyszek, Agnieszka; Singh, Rajani

SPG 1 Search and Patrolling Games 1

Location: FC1 006 - FC1 Edifício de Matemática
Chair: Angelopoulos, Spyros

- 09:00 AM** **Social Distancing, Gathering, Search Games: Mobile Agents on Simple Networks**
Zeng, Li; Alpern, Steve
- 09:25 AM** **Learning in a game of search and pursuit**
Brethouwer, Jan-Tino; Fokkink, Robbert
- 09:50 AM** **A polyhedral approach to search games**
Lidbetter, Thomas; Hellerstein, Lisa
- 10:15 AM** **Searching on the Line with Hints**
Spyros, Angelopoulos; Diogo, Arsénio; Shahin, Kamali
- 10:40 AM** **Break**

Stochastic Games

Location: FC1 029 - FC1 Edifício de Matemática
Chair: Kleshnina, Maria

- 11:10 AM** **McKean stochastic game for a spectrally negative Lévy process and a negative discount rate**
Palmowski, Zbigniew; Palczewski, Jan
- 11:35 AM** **The effect of environmental information on cooperation in stochastic games**
Kleshnina, Maria; Hilbe, Christian; Simsa, Stepan; Chatterjee, Krishnendu; Nowak, Martin
- 12:00 PM** **Bilateral sequential selections with minimization of failure**
Szajowski, Krzysztof

Topics in Applied Models Involving Microeconomic Agents

Location: FC1 030 - FC1 Edifício de Matemática
Chair: Álvarez-López, Alberto A

- 11:10 AM** **KNPLS: measuring Consumer Behaviour latent data with PLS-PM along with Kohonen Networks**
Sérgio, Nobre
- 11:35 AM** **Climate change, evaluation tools for the analysis of local microeconomic measures: A practical application case. The decarbonization of public transport in Zaragoza**
Martín García, Rodrigo; Arizcuren-Blasco, Javier; Ruiz-Rúa, Aurora
- 12:00 PM** **Optimal sports pricing under uncertainty**
Álvarez-López, Alberto A; Rodríguez-Puerta, Inmaculada

ERE 3 Environmental and Resource Economics 3

Location: FC1 004 - FC1 Edificio de Matemática
Chair: Chenavaz, Régis

- 11:10 AM** **Great fish war with moratorium**
Dahmoun, Ilyass; Parilina, Elena; Zaccour, Georges
- 11:35 PM** **Does the circular economy fuel the throwaway society? The role of opportunity costs.**
Régis, Chenavaz; Schlosser, Rainer; Figge, Frank; Dimitrov, Stanko

SPG 2 Search and Patrolling Games 2

Location: FC1 006 - FC1 Edificio de Matemática
Chair: Lidbetter, Thomas, Rutgers University

- 11:10 AM** **A Classical Search Game in Discrete Locations**
Clarkson, Jake
- 11:35 AM** **Search and rescue with a go/no-go**
Fokkink, Robbert
- 12:00 PM** **Continuous Patrolling Games**
Alpern, Steve; Bui, Thuy; Lidbetter, Thomas; Papadaki, Katerina
- 12:25 PM** **Lunch**

02:00 PM **Isaacs Awards Presentations Room: FC1 027**