

20th International Symposium on Dynamic Games and Applications

Program

Facultad de Derecho (Plaza de la Universidad)

Tuesday, July 9, 2024

9:00 - 9:30	Registration		
9:30 - 10:00 Salón de Grados	Welcome address		
10:00 - 11:00 Salón de Grados	Plenary I Chair: Arne Traulsen Astrid Hopfensitz <i>Signaling trustworthiness: experimental evidence on the signals used to infer trustworthiness in other</i>		
11:00 - 11:30	Coffee Break		
	EG1 Room A001	EREM 1 Room A002	NG1 Room A003
11:30 - 13:00	Chair: Kateřina Staňková Lessard, S. Falniowski, F. Staňková, K.	Chair: Santiago Rubio Savaskan, G.S. Álvarez-López, A. Rubio, S.	Chair: Vladimir Mazalov Luckraz, S. Kumar, A. Mazalov, V.
13:00 - 14:30	Lunch		
	EG 2 Room A004	DGT1 Room A005	MS 1 Room A006
14:30 - 16:00	Chair: Fabio Lamantia Marco, J. Buratto, A. Lamantia, F.	Chair: Mabel Tidball Imhof, L. Balbus, L. Tidball, M.	Chair: Suresh Sethi Sigué, S.P. Singh, R. Sethi, S.
16:00 - 16:30	Coffee Break		
	EG 3 Room A004	EREM2 Room A005	Young Scholar Presentations I Room A006
16:30 - 18:00	Chair: Mark Broom Bielawski, J. Honasoge, K. Broom, M.	Chair: Hassan Bencheekroun de Frutos Cachorro, J. Wiszniewska-Matyskiel, A. Bencheekroun, H.	Chair: Vlastimil Krivan Satouri, M. Wrona, M. Lewis, K. D.
18:00 - 19:00	Salón de Grados General Assembly of ISDG (All participants in the Symposium are welcome to attend)		
20:00	Welcome Cocktail (gardens of Colegio de Santa Cruz, Calle Cardenal Mendoza)		

DGT: Dynamic Games Theory

EG: Evolutionary Games

EREM: Environmental and Resource Economics and Management

MFG: Mean Field Games

MS: Management Science

NG: Network Games

20th International Symposium on Dynamic Games and Applications

Wednesday, July 10, 2024

9:00 - 11:00 Salón de Grados	Tutorial I Chair: Guiomar Martín-Herrán Tamer Başar <i>Dynamic Games with Networked Players and Learning Algorithms</i>		
11:00 - 11:30	Coffee Break		
	EG 4 Room A001	DGT 2 Room A002	Young Scholar Presentations II Room A003
11:30 - 13:00	Chair: Arne Traulsen Garjani, H. Kroumi, D. Traulsen, A.	Chair: Georges Zaccour Hayek, N. Jaskiewicz, A. Zaccour, G.	Chair: Florian Wagener Lopez-Casado, P. Brambilla, C.
13:00 - 15:00	Lunch Meeting of the Executive Board of ISDG (Room A003)		
	EG 5 Room A004	EREM3 Room A005	MFG 1 Room A006
15:00 - 16:30	Chair: Vladimir Mazalov Karagiannis-Axypolitidis, N. Jansen-Storbacka, L. Mazalov, V.	Chair: Fouad El Ouardighi Navas, J. Sacco, A. El Ouardighi, F.	Chair: Roland Malhamé Alharbi, A. Breton, M. Malhamé, R.
16:30 - 17:00	Coffee Break		
17:00 - 18:30 Salón de Grados	Tutorial II Chair: Francisco Cabo Nikoleta E. Glynatsi <i>Learning in Games</i>		

20th International Symposium on Dynamic Games and Applications

Thursday, July 11, 2024

9:30 - 10:30 Salón de Grados	Plenary II Chair: Florian Wagener Alessio Porretta Mean field games in economic growth models		
10:30 - 11:00	Coffee Break		
	NG 2 Room A001	EREM 4 Room A002	MS2 Room A003
11:00 - 13:00	Chair: Leon Petrosjan Rajiansyah, R. Li, Z. Dragicevic, A. Petrosjan, L.	Chair: Florian Wagener Iannucci, G. Pinto, A. Tampieri, A. Wagener, F.	Chair: Pietro de Giovanni Crettez, B. Lu, L. Mesrar, S. de Giovanni, P.
13:00 - 14:30	Lunch		
	EG 6 Room A004	DGT3 Room A005	MFG 2 Room A006
14:30 - 15:30	Chair : Vlastimil Krivan Argasinski,K. Krivan, V.	Chair: Anton Bondarev Von Moll, A. Bondarev, A.	Chair: Rita Ferreira Wiecek, P. Ferreira, R.
16:15	Visit to wine cellar		
20:45	Symposium Dinner (Restaurant La Parrilla de San Lorenzo, Calle de Pedro Niño 1)		

Friday, July 12, 2024

9:30 - 11:00 Salón de Grados	Isaacs Awards Presentations		
11:00 - 11:30	Coffee Break		
	EG 7 Room A001	MS 3 Room A002	
11:30 - 13:00	Chair: David Ramsey Haq, H. Le Méneç, S. Ramsey, D.	Chair: Michèle Breton Sadana, U. Marín-Solano, J. Breton, M.	
13:00	Farewell		

DETAILED PROGRAM

Tuesday, July 9, 2024

9:00 - 9:30 **Registration**

9:30 - 10:00 **Welcome address**

10:00 - 11:00 **Plenary I** Chair: Arne Traulsen

Location: Salón de Grados

Signaling trustworthiness: experimental evidence on the signals used to infer trustworthiness in other

Astrid Hopfensitz

11:00 - 11:30 **Coffee break**

11:30 - 13:00 **Parallel Sessions 1**

EG1 Evolutionary Games 1

Chair: Kateřina Staňková

Location Room A001

Evolution of cooperation in public goods games with assortment in finite populations

Éloi Martin, **Sabin Lessard**

On the discrete-time origins of the replicator dynamics: from convergence to instability and chaos
Fryderyk Falniowski,

Integrating vector-valued strategies into Stackelberg evolutionary games: Challenges and applications

Kateřina Staňková

EREM1 Environmental and Resource Economics and Management 1

Chair: Santiago Rubio

Location Room A002

Adaptation to climate change and stability of international environmental agreements

Michèle Breton, **Gonul Selin Savaskan**

Punishment mechanisms for pollution control: the quasiconstant fine

Alberto A Álvarez-López, Alberto Pinto, Filipe Martins

Cournot competition and green innovation in a dynamic oligopoly

Guíomar Martín-Herrán, **Santiago J. Rubio**

NG1 Network Games 1

Chair: Vladimir Mazalov

Location Room A003

The game of cops and robbers on digraphs

Shravan Luckraz

On the implementation of credible incentive strategies as consistent conjectural variations Equilibria (CCVE) in network games

Aaditya Kumar, Puduru Viswanadha Reddy

Congestion game with different types of players

Vladimir Mazalov, Natalia Nikitina

13:00 - 14:30 Lunch

14:30 -16:00 Parallel Sessions 2

EG2 Evolutionary Games 2

Chair: Fabio Lamantia

Location Room A004

Tipping the economy towards cooperation: The interplay between intrinsic and extrinsic motivation in quantal responses

Jorge Marco, Renan-Ulrich Goetz

Controlling an evolutionary game to limit clientelism

Alessandra Buratto, Cesaretto Rudy, Eduardo Mello

Oligopolistic competition under non-compliant behavior in an evolutionary setting

Fabio Lamantia, Mario Pezzino, Yuan Wang

DGT1 Dynamic Games Theory 1

Chair: Mabel Tidball

Location Room A005

Some applications of ideas of stochastic game dynamics to social choice problems

Lorens Imhof

Iterative monotone comparative statics

Łukasz Balbus, Wojciech Olszewski, Kevin Reffett, Łukasz Woźny

Revisiting Stackelberg on his own light

Denis Claude, **Mabel Tidball**

MS1 Management Science 1

Chair: Suresh Sethi

Location Room A006

Is multichannel retailing marketing integration a panacea?

Simon Sigué, Guiomar Martín-Herrán

Stackelberg competition in dynamic advertising with an application to cryptocurrency market

Rajani Singh

Hierarchical and mixed leadership games for dynamic supply chains: Applications to cost, learning and co-op Advertising

Suresh Sethi

16:00 - 16:30 Coffee break

16:30 - 18:00 Parallel Sessions 3

EG3 Evolutionary Games 3

Chair: Mark Broom

Location Room A004

Heterogeneity, reinforcement learning and chaos in population games

Jakub Bielawski, Fryderyk Falniowski

Controlling cancer: Designing evolutionary game-theory based treatment protocols

Kailas Honasoge, Laura Jansen-Storbacka, Roel Dobbe, Kateřina Staňková

The simple rules of multiplayer cooperation in networks of communities

Diogo Pires, **Mark Broom**

EREM2 Environmental and Resource Economics and Management 2

Chair: Hassan Benchekroun

Location Room A005

Farmers' adaptive investments and groundwater resource impact in a changing climate

Julia de Frutos Cachorro, Lucia Sbragia

Agreements self enforcing despite delayed information and other means to avoid "the tragedy of the commons"

Agnieszka Wiszniewska-Matyszekiel, Rajani Singh

On the limits of monopolization through acquisitions and mergers in nonrenewable resource industries

Hassan, Benchekroun, Amrita RayChaudhuri, Chan, Ying Tung

Young Scholar Presentations I

Chair: Vlastimil Krivan

Location Room A006

Impact of competition and treatment dose on cancer treatment outcome

Mohammadreza Satouri, Kateřina Staňková, Jafar Rezaei

Optimal cartel strategy if facing a myopic fringe in a non-renewable resource economy

Agnieszka Wiszniewska-Matyszekiel, **Maciej Wrona**

Stability of the multi-population BNN dynamics

Karl D. Lewis, A.J. Shaiju

18:00 - 19:00 General Assembly of ISDG

Location Salón de Grados

20:00 Welcome Cocktail (Gardens of Colegio de Santa Cruz, Calle Cardenal Mendoza)

Wednesday, July 10, 2024

9:00 - 11:00 Tutorial I Chair: Guiomar Martín-Herrán **Location: Salón de Grados**

Dynamic Games with Networked Players and Learning Algorithms
Tamer Başar

11:00 - 11:30 Coffee break

11:30 - 13:00 Parallel Sessions 4

EG4 Evolutionary Games 4

Chair: Arne Traulsen

Location Room A001

Evolutionary game model of cancer population growth: Insights from an in vitro experiment on non small cell lung cancer

Hasti Garjani, Joel Brown, Johan Dubbeldam, Kateřina Staňková

Evolutionary game with stochastic payoffs in a finite island model

Dhaker Kroumi, Sabin Lessard

Rethinking the connection between theoretical ecology and evolutionary game theory

Corina Tarnita, **Arne Traulsen**

DGT2 Dynamic Games Theory 2

Chair: Georges Zaccour

Location Room A002

On infinite-horizon difference games

Naila Hayek

On Markov perfect equilibria in discounted stochastic ARAT games

Anna Jaskiewicz, Andrzej Nowak

Robust strategies in dynamic games played over event trees

Elena Parilina, **Georges Zaccour**

Young Scholar Presentations II

Chair: Florian Wagener

Location Room A003

Optimal investment and benefit strategies for a target benefit pension plan where the risky assets are jump diffusion processes

Paula Lopez-Casado, Ricardo, Josa-Fombellida

A binary state continuous time Markov chain model for offshoring and reshoring

Chiara Brambilla, Luca Grosset, Elena Sartori

13:00 - 15:00 Lunch

Meeting of the Executive Board of ISDG (Room A003)

15:00 - 16:30 Parallel Sessions 5

EG5 Evolutionary Games 5

Chair: Vladimir Mazalov

Location Room A004

Bimatrix games for plant-soil feedbacks

Nikos Karagiannis-Axypolitidis

Competition between cancer cells and the success of evolutionary therapy for non-small cell lung cancer

Laura Jansen-Storbacka, Kailas Honasoge, Sepinoud Azimi, Kateřina Staňková

Attrition game and random walks

Vladimir Mazalov, Anna Ivashko

EREM3 Environmental and Resource Economics and Management 3

Chair: Fouad El Ouardighi

Location Room A005

Status concern and environmental awareness in a common access resource game with heterogeneous agents

Carles Mañó-Cabello, Jesús Marín-Solano, **Jorge Navas**

Altruistic behavior and international environmental agreements: A differential game approach

Armando Sacco

Recent advances on pollution control in economics and management science: Stakes and challenges

Fouad El Ouardighi

MFG1 Mean Field Games 1

Chair: Roland Malhamé

Location Room A006

A first-order mean-field game on a bounded domain with mixed, contact-set boundary conditions

AbdulRahman Alharbi, Yuri Ashrafyina, Diogo Gomes

Risk-sensitive optimal control and major-minor mean field games: A variational framework

Dena Firoozi, Hanchao Liu, **Michèle Breton**

An inverse Nash mean field game approach to the charging of electric vehicles in solar powered parking lots

Samuel M. Muhindo, **Roland Malhamé**, Geza Joos

16:30 - 17:00 Coffee break

17:00 - 18:30 Tutorial II Chair: Francisco Cabo

Location: Salón de Grados

Learning in games

Nikoleta E. Glynatsi

Thursday, July 11, 2024

9:30 - 10:30 **Plenary II** Chair: Florian Wagener
Mean field games in economic growth models
Alessio Porretta

Location: Salón de Grados

10:30 - 11:00 **Coffee break**

11:00 - 13:00 **Parallel Sessions 6**

NG2 Network Games 2

Chair: Leon Petrosyan

Location Room A001

Flow control in a computer network: A cooperative game approach

Rajiansyah Rajiansyah, David Ramsey, Dariusz Gasior

A study of intergenerational mobility based on a multi-stage social network game

Zekun Li, Min Cheng, Yin Li

Quantum exchange networks

Arnaud Dragicevic

About the instability of cooperative communication structures in differential network games

Leon Petrosyan, Yaroslavna Pankratova, David W.K. Yeung

EREM4 Environmental and Resource Economics and Management 4

Chair: Florian Wagener

Location Room A002

Strategic renewable energy communities

Stefano Clò, **Gianluca Iannucci**, Alessandro Tampieri

Revisiting Barrett's paradox

Alberto Pinto

Public pro-environmental behaviour and the transition to sustainable production

Gianluca Iannucci, **Alessandro Tampieri**

All Markov-perfect Nash equilibria of the transboundary pollution game

Niko Jaakola, **Florian Wagener**

MS2 Management Science 2

Chair: Pietro de Giovanni

Location Room A003

Counterfeiting, quality and reputation: A dynamic game approach

Bertrand Crettez, Naila Hayek, Guiomar Martín-Herrán

Managing random events and Ambiguity in supply chain decision-making

Lijue Lu, Wenbin Cao

Sticky price competition with environmental concerns

Sara Mesrar, Fouad El Ouardighi

A dynamic game of subscription-based economy and circular economy

Pietro De Giovanni

13:00 - 14:30 Lunch

14:30 - 15:30 Parallel Sessions 7

EG6 Evolutionary Games 6

Chair: Vlastimil Krivan

Location Room A004

Growing up and feeling like a loser. Impact of the juvenile maturation delay on the eco-evolutionary game dynamics in changing environment

Krzysztof Argasinski, Jacek Miękiś

Reducing courtship time promotes marital bliss: The Battle of the Sexes game revisited with costs measured as time lost

Vlastimil Krivan, Ross Cressman

DGT3 Dynamic Games Theory 3

Chair: Anton Bondarev

Location Room A005

Complete solution of the Lady in the lake scenario

Alexander Von Moll, Meir Pachter

Hybrid differential games with piecewise-smooth dynamics

Anton Bondarev

MFG2 Mean Field Games 2

Chair: Rita Ferreira

Location Room A006

Multiple-population discrete-time mean field games with discounted and total payoffs: approximation of games with finite populations

Piotr Wiecek

Weak-strong uniqueness for solutions to MFGs

Rita Ferreira, Diogo Gomes, Vardan Voskayan

16:15 Excursion: Visit to wine cellar

20:45 Symposium dinner (Restaurant La Parrilla de San Lorenzo, Calle de Pedro Niño 1)

Friday, July 12, 2024

9:30 - 11:00 Isaacs Awards Presentations

11:00 - 11:30 Coffee break

11:30 - 13:00 Parallel Sessions 8

EG7 Evolutionary Games 7

Chair: David Ramsey

Location Room A001

The effect of herding and dispersal on the evolution of cooperation
Hasan Haq, Mark Broom

The sardine run evolutionary game based on Lanchester cost functions
Stéphane Le Méneç

On a large population mate choice game with scramble search
David Ramsey

MS3 Management Science 3

Chair: Michèle Breton

Location Room A002

A differential game with impulse control for optimizing subsidy rollouts
Utsav Sadana, Georges Zaccour

A coalitional great fish war model with quasi-hyperbolic discounting
Joakim Alderborn, **Jesus Marín-Solano**

Valuation and efficiency of performance pricing in syndicated loans
Michèle Breton, Tiguene Nabassaga