

# 14th ISDG Workshop, Yerevan, Armenia, June 11-13, 2025

## Program

Sessions on June 11 are held at the Armenian State University of Economics, Yerevan, 0025, Nalbandyan 128, Conference Hall (Faculty of Management, third floor).

Sessions on June 12 and 13 are held at hotel ibis Yerevan Center, Karin Hall.

### Wednesday, June 11.

**8:00 – 8:45**            **Registration**

**8:45 – 9:00**            **Opening address**

**9:00 – 9:50**            **Invited talk 1, Chair: Florian Wagener**

Differential cooperative network games  
**Leon Petrosjan**

**9:50 – 10:20**            **Break**

**10:20 – 11:10**            **Invited talk 2, Chair: Elena Parilina**

Using Evolutionary Game Theory to explain puzzling biological problems  
**Mark Broom**

**11:10 – 11:20**            **Break**

**11:20 – 12:10**            **Invited talk 3, Chair: Anton Proskurnikov**

Investment in Emissions Abatement Capacity when Consumers Value the Environmental Performance of the Supply Chain  
**Georges Zaccour**

**12:10 – 13:30**            **Lunch**

**13:30 - 15:10**      **Contributed session 1, Chair: Michèle Breton**

Discrete-time Replicator Dynamical Systems on Wardrop-Schur Optimal Networks: Equilibrium, Dynamics, and Stability

**Armen Bagdasaryan**, Mansoor Saburov

Game-Based Cooperative Path-Following for UAV Systems

**Tigran Bakaryan**

Balancing individual decision and distributive control: Dual framework for epidemic mitigation using evolutionary games and impulse strategies

**Xiuxiu Liu**

Quantile-Dependent Mean Field Games with Applications to Early-Stage Venture Investments

**Michèle Breton**, Dena Firoozi, Rinel Foguen Tchuendom

**15:10 – 15:40**      **Break**

**15:40 – 17:20**      **Contributed session 2, Chair: Naira Hovakimyan**

A Dynamic Game of Joint Opinion–Reputation Dynamics with Competing Manipulating Agents

**Dmitry Gubanov**

Top Score in the Iterated Prisoner's Dilemma Tournament

**Dashiell Fryer**, Frederick Vincent

Nonlinear Markov-perfect Nash Equilibria of a Linear-Quadratic Infinite Horizon Differential Game

Niko Jaakkola, **Florian Wagener**

A Tribute to Arik Melikyan

**Naira Hovakimyan**

**19:00**      **Cocktail**

## Thursday, June 12

**8:30 - 10:10**                      **Contributed session 3, Chair: Anna Rettieva**

Behavioral Adaptation in Tax Systems: An Evolutionary Game Model of Audits and Compliance

**Elena Gubar**, Vassili Kolokoltsov, Ekaterina Vostrenkova

Equilibria in Dynamic Games with Ambiguity about Future Consequences

**Maciej Wrona**, Agnieszka Wiszniewska-Matyszkiewicz

About Time-consistency of Cooperative Networks in Differential Network Games

Leon Petrosyan, **Yaroslavna Pankratova**

Dynamic Multicriteria Resource Management Problems

**Anna Rettieva**

**10:10 – 10:40**                      **Break**

**10:40 – 12:20**                      **Contributed session 4, Chair: Zaruhi Hakobyan**

Dynamic Network Formation with Farsighted Players and Limited Capacities

Michel Grabisch, **Elena Parilina**, Agnieszka Rusinowska, Georges Zaccour

Links vs. Incentives: A Comparative Study of Interventions in Games on Networks

**Ilya Petrov**

On a Pursuit-Evasion Like Game between Two Populations

**Luciano Marzuffero**, Fabio Bagagiolo, Rossana Capuani

A Behavioral Model of Popularity and Content Dynamics in Social Media

**Zaruhi Hakobyan**, Zafer Kanik

**12:20 – 13:30**                      **Lunch**

**13:30 – 15:10**      **Contributed session 5, Chair: Suresh Sethi**

Determining Altruism in International Environmental Agreements  
Lina Mallozzi, **Armando Sacco**

Linear Differential Games with Multidimensional State Vector: Numerical Construction of Stable Bridges and Trajectories  
Sergey Kumkov, **Anton Mikhailov**

Bounded Confidence Opinion Dynamics with Stubborn Agents  
Anton Proskurnikov, **Iryna Zabarianska**

The Generalized Sethi Advertising Model: Nash and Stackelberg Games  
**Suresh Sethi**

**15:10 – 15:40**      **Break**

**15:40 – 17:55**      **Contributed session 6, Chair: Vladimir Mazalov**

The Folk Theorem of Evolutionary Game Theory for Replicator Equations Given by Nonlinear Operators  
Mansoor Saburov, **Armen Bagdasaryan**

A Hybrid BERTopic-NetLogo Approach for Evolutionary Simulation of Social Media Information Flows  
Elena Gubar, **Ivan Blekanov**, Xuanping Fan, Yin Li

Unlocking Data Dividends: Evolutionary Pathways of Government Open Data and Enterprise Value Co-Creation  
Chi Zhao, **Xiang Li**

**Ten-minute Break**

Analyzing Cooperative Behavior of Large Language Models: A Markov Strategy Approach to the Prisoner's Dilemma  
**Ivan Kozitsin**

Stability of Coalition Structures in Environmental Differential Game  
**Vladimir Mazalov**, Jiangjing Zhou

**20:00**      **Workshop Dinner**

**Friday, June 13**

**8:30 - 10:10**            **Contributed session 7, Chair: Anna Tur**

Cooperative Differential Games with Pairwise Interactions  
**Yang He**

Dynamic Competition over Visual Product Design  
**Prabirendra Chatterjee**

The Shapley value contribution to Explainable Artificial Intelligence: a comprehensive survey  
**Chi Zhao**, Jing Liu, Elena Parilina

Non-renewable resource extraction model with uncertainties  
**Anna Tur**, Peichen Ye, Feiran Xu

**10:10 – 10:40**            **Break**

**10:40 – 12:55**            **Contributed session 8, Chair: Artem Sedakov**

Strategic Compliance in Public Health Crises: An Evolutionary Game Model of Individual and Social Interactions  
**Ke Ma**

A Comparative Study of Shapley Value-Based Feature Importance Methods for Linear Regression Model  
**Jing Liu**, Chi Zhao, Elena Parilina

Strategic Interaction and Belief Evolution in Uncertain Multi-Agent Systems  
**Jiangjing Zhou**, Ovanes Petrosian

**Ten-minute Break**

Credible Incentive Equilibrium Strategies in Static Network Games and N-Player Linear-State Differential Games  
**Aaditya Kumar**, Puduru Viswanadha Reddy

Stable cooperation in a river pollution game  
Arsenii Vilisov, **Artem Sedakov**

**12:55 – 13:00**            **Closing remarks**