Call for Papers

Special Issue at the Occasion of *EURO 2025* Leeds, UK

OR Advances in Game Theory and Algorithmic Game Theory
of
Journal of Dynamics and Games (JDG)

Deadline for Submissions: November 1, 2025

1. AIMS AND SCOPE

Game theory is a mathematical framework developed to address problems with conflicting or cooperating parties who are able to make rational decisions. The theory primarily deals with the finding the optimal rational decision in various scenarios. Game theory is a relatively new discipline. The modern game theory was introduced in the works of John von Neumann in the 1920s. John von Neumann, Oskar Morgenstern and John Nash were the main contributors to the development of game theory. The theory offers a wide number of applications in different fields, including economics, political science, finance, psychology, biology, etc.

Algorithmic game theory is an emerging field at the interface between game theory and computer science with the aim of understanding and designing algorithms in environments of strategic importance.

The guest of this special issue, Journal of Dynamics and Games is a pure and applied mathematical journal that publishes high quality peer-review and expository papers in all research areas of expertise of its editors. The main focus of JDG is in the interface of Dynamical Systems and Game Theory. It is devoted to the development and the diffusion of mathematical ideas and techniques that arise from the analysis and the modelling of systems where agents (whether they be rational players, markets, plants, animals, ecosystems, communication systems, etc.) interact dynamically over time.

We invite papers challenging mathematical questions occurring in such systems or provide a rigorous mathematical analysis of models where tools from dynamics and games prove to be useful in Operational Research (OR) and vice versa. Areas covered include dynamic games, stochastic games, differential games, evolutionary games, models of learning and evolution, repeated games, mean field models, voting, auctions, matching, assignment games and other research areas of cooperative and non-cooperative game theory, preferentially where dynamics play a role, as well as the associated applications in social, economic, biology, life, physical and computer sciences.

The objective of this special issue is to explore latest development of mathematical and OR ideas and techniques in modeling, and simulation related with Game or Algorithmic Game Theory, applied in economics, finance, biology, neuroscience and beyond. Papers in newly evolving topics are especially welcomed. We invite researchers and experts worldwide to submit high-quality innovative research papers and critical review articles on the subsequent potential topics.

This Special Issue is endorsed at the occasion of the conference *EURO 2025 Leeds* (https://euro2025leeds.uk).

2. TOPICS COVERED

The topics include but are not limited to:

Games in economics	Games in finance
o Games in micro-economics	o Games in financial and commodity markets
o Games in macro-ecomomics	o Games in auctions
o Prey-predator models in economics	o Games on wealth processes
o Games on information spread in ecomomics	o Games on price processes
o Games under interval or ellipsoidal uncertainty	o Games on consumption processes

o Games under grey or fuzzy uncertainty	o Games on portfolio processes
o Stochastic and differential games	o Stochastic optimal control with games
o Economic games under regime switching	o Financial games under regime switching

Games in biology

o Prey-predator models in biology
o Game theory in bioinformatics and system biology
o Game theory in epidemiology
o Game theory in the biology of neuroscience
o Game theory in cancer research and treatment
o Game theory in environmental protection
o Gene-environment networks under uncertainty or regime switching
o Hybrid systems in biology

Algorithmic Game Theory

o Auctions and pricing
o Behavioral economics and behavioral modeling
o Computational advertising
o Computational aspects of equilibria
o Computational social choice
o Econometrics, ML and Data Science
o Economic and strategic aspects of machine learning models
o Fair division
o Information design including contest and contract design
o Learning in games and markets
o Market design
o Matching markets
o Mechanism design
o Network games

3. SUBMISSION GUIDELINES

Please follow the journal style and the guidelines of JDG and AIMS.

All authors should submit their paper to the following specific address:
https://ef.msp.org/submit/aims_jdg&cr=SecondedQuarterSuitableRestoring.

4. IMPORTANT DATES

1 November 2025	Submission deadline	
January 2026	Notification of the first round review	)
April 2026	Revised submission due	) for guidance only
July 2026	Final notice of acceptance/reject	)

5. GUEST EDITORS

Prof. Dr. Alberto Pinto,   University of Porto, Portugal
E-mail: aapinto1@gmail.com

Prof. Dr. Yukun Cheng,   Jiangnan University, China
E-mail: ykcheng@amss.ac.cn

Prof. Dr. Gerhard-Wilhelm Weber,   Poznan University of Technology, Poland
E-mail: gerhard_wilhelm.weber@put.poznan.pl