

# Computational Intelligence and AI in Economic and Financial Games

**Special-issue editors: Han La Poutré, Edward Tsang, Athanasios V. Vasilakos**

Economic and financial markets are often modeled in the form of economic or financial games. This involves different players (or agents) that act in such a marketplace. Such market models may vary from basic models like the Cournot oligopoly game, to labour markets, financial markets, auctions, and negotiations.

Economic games model or prescribe rules for economic interaction and the resulting payoffs. Given such game rules, typical issues are what strategies players should play to get the best reward, what equilibria exist in such games, and how rules should be changed to obtain certain intended overall behaviour (e.g. from the regulators' point of view).

The usage of Computational Intelligence and AI techniques in economic games has increased considerably in recent years. Instances include developing adaptive agent strategies in games, developing negotiation strategies by using adaptive opponent models, or by developing game rules that meet the intended goals for joint behaviour of the players (mechanism design).

This special issue invites original papers in the above fields. Topics include the development, usage or application of AI and CI techniques for games including, but not limited to:

- Basic economic market games (coming from micro economics)
- Advanced market models (coming from realistic markets)
- Auction and negotiation games
- Games for policy formulation and training purposes
- Bargaining models
- Auditing
- Investment games and Risk management

The objectives may vary from strategy development and policy design, to mechanism design, investigation of emergent behaviour, or the use of simulation tools for decision makers (management games). Techniques of particular interest include:

- Monte Carlo simulations
- Reinforcement learning
- Neural networks
- Evolutionary algorithms, evolutionary game theory, and the evolution of agent behavior
- Static and dynamic games of incomplete information

Authors with original and innovative papers are invited to submit to the Special Issue. Authors should follow normal T-CIAIG guidelines for their submissions, but clearly identify their papers for this special issue during the submission process.

## Schedule

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- Deadline for submissions: February 15 2010
- Notification of Acceptance: April 28 2010
- Final copy due: June/July 30 2010
- Publication: Autumn 2010

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