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Preface to the Special Issue on Game Theory and Economic Applications

This special issue of the *International Game Theory Review* on "Game Theory and Economic Applications" consists of a selection of six papers, the first three of them presented at the *12th European Meeting on Game Theory*, also known as *12th Spanish-Italian-Netherlands Game Theory Meeting* (*SING 12*). SING12 took place in Odense at the University of Southern Denmark from 11 July to 13 July, 2016, and it was attended by about 150 researchers of 27 countries, including four invited speakers. The history of the annual SING conferences dates back to 1983 with the first meeting in Italy. Spain joined as host in 2001, the first SING meeting was held in Maastricht in 2005, and later other European countries have became organizers of this conference.

The papers in this issue deal with topics in various areas of game theory and its applications so that they reflect the goal of the SING meetings to gather different streams of game theoretical research in order to encourage and stimulate collaboration between theoretical and applied issues.

All six papers have been reviewed according to the editorial standards of this journal, and we are grateful to the referees for their help.

The first paper studies commitment to mixed strategies in two-player bimatrix games. For various classes of bimatrix games that generalize zero-sum games, Stefanos Leonardos and Costis Melolidakis investigate the relationship between max–min strategies, Nash equilibria, and equilibria in commitment games where one player, the leader, commits to a (possibly mixed) strategy and the other player chooses his strategy after being informed about the irrevocable commitment of the leader (but not of its realization in case it is mixed). The paper adds several insights to the literature on nonzero-sum bimatrix games.

In the second paper, Sebastien Rouillon investigates private provision problems with differentiable strictly convex cost functions in which the agents collaborate to complete a public project that provides them with benefits if the cumulative effort is large enough. He characterizes Markov-perfect equilibria and shows that their allocations may be inefficiently small and that some socially efficient projects are not completed.

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In the third paper, Judith Timmer and Werner Scheinhardt model the cost sharing problem of a Jackson network of service stations as a cooperative TU game. To improve upon the total expected waiting time, the service stations (players) may redistribute the total arrival rate of customers. They show that the game is totally balanced so that cooperation is beneficial for all stations, and they introduce a cost allocation rule that belongs to the core of the game.

In the next paper, Koji Okuguchi and Takeshi Yamazaki investigate Cournot oligopolies of one public and several private firms. Under quite general conditions on the demand and cost functions, they show the uniqueness of the Cournot equilibrium. Moreover, they provide conditions under which the public and at least one private firm are producing.

Mario A. Garcia-Meza, Ekaterina Viktorovna Gromova, and Jose Daniel Lopez-Barrientos, the authors of the fifth paper, find optimal rules for advertising expenditures of firms in oligopolistic competition. They find a time-consistent cooperative solution for a dynamic model of an oligopoly playing an advertising game of goodwill accumulation with random terminal time.

In the market for medicines, parallel traders gain from buying drugs in a country with lower prices and then selling them in a country with higher prices. Giorgio Gnecco, Berna Tuncay, and Fabio Pammolli, the authors of the final paper, investigate the efficiency of the subgame-perfect equilibria of several dynamic noncooperative game-theoretic models for the parallel trade of pharmaceuticals. They also investigate modifications, in which the transfer payment from the potential parallel trader to the manufacturer is removed or determined by Nash bargaining.

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