



Guest editorial

Computing, economic dynamics, and finance

This special issue of the *Journal of Economic Dynamics & Control* collects a set of papers that were originally presented at the Fifth International Conference of the Society for Computational Economics, held at Boston College in June 1999. Shortly after the conference, all authors were invited to submit their work to the *JEDC*. All submitted manuscripts went through the usual review process and were accepted or rejected based on the reports and recommendations of outside referees.

The ten papers that appear in this special issue are, to a large extent, representative of those presented at the conference. Though diverse in their subjects, the papers are unified both in their high degree of scientific rigor and in their creative application of computational methods to study key issues in economic dynamics and finance. The first paper, by Hans-Martin Krolzig and David F. Hendry, describes how the general-to-specific procedures for econometric model selection, which have long been associated with the authors' "LSE approach," can be automated on the computer.

The next five papers focus on economic dynamics and their policy applications. William Blankenau, M. Ayhan Kose, and Kei-Mu Yi use their quantitative analysis of a dynamic, stochastic, general equilibrium model to assess the role of world real interest rates in driving economic fluctuations in Canada. Nicoletta Batini and Edward Nelson use a pair of dynamic models to study an issue of special interest to monetary policymakers in the United Kingdom: the selection of an optimal horizon for inflation targeting. Like Batini and Nelson, Robert J. Tetlow and Peter von zur Muehlen present results that will surely be of interest to central bankers around the world; they use innovative techniques in robust and optimal control to ask how monetary policymakers should behave when the economy's true structure is unknown. Serdar Sayan and Arzdar Kiraci then shift our attention to fiscal policy with their computational investigation of pension reform in Turkey, while Jenny X. Li skillfully combines analytical and numerical tools to characterize non-steady-state solutions to a popular dynamic monetary model.

The papers by Fabrice Collard and Michel Juillard and by Michael Sullivan contain applications of numerical analysis to models in finance. Collard and

Juillard consider the accuracy of numerical solutions to a consumption-based asset-pricing model obtained using stochastic perturbation methods. Sullivan, in turn, develops a computational approach, based on numerical integration techniques, for solving continuous-state models of the short-term interest rate; his paper provides an attractive alternative to the more familiar lattice approach that is used to solve discrete-state models.

The last two papers in this special issue contribute to the growing body of literature on genetic algorithms. Thomas Riechmann explores the links between genetic algorithm learning and evolutionary game theory, while M. Utku Ünver shows how genetic algorithms can be used to understand the behavior of participants in the entry-level British medical labor market.

Before closing, I would like to take this opportunity to thank, on behalf of all conference attendees and participants, the members of the program committee — particularly co-chairmen Hans Amman, Kit Baum, and David Belsley — for putting together a superb group of sessions for us to learn from and enjoy. Personally, I would also like to thank Kit and David, two of my colleagues at Boston College, for their encouragement and advice in putting this special issue together. Special thanks also go to the editor of *JEDC*, Berç Rustem, and two associate editors, Tim Cogley and Volker Wieland, each of whom provided timely and valuable assistance whenever it was needed. It almost goes without saying that the consistent high quality of the papers in this special issue owes much to the anonymous referees who devoted their time and efforts to evaluating and improving each manuscript; special thanks go to them as well. Finally, I would like to thank Mary Foley, Pauline Lonergan, and Kathleen Tubman, all of the administrative staff at the Economics Department, Boston College; without their expert assistance, the creation of this special issue would not have been possible.

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