

Wild@Ace₂₀₀₄

Industry and Labour Dynamics II

Proceedings of the wild@ace 2004 conference

Introduction

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This volume contains the proceedings of the wild@ace 2004 conference, organized by LABORatorio R. Revelli Centre for Employment Studies and held in Moncalieri, Italy, on December 3-4, 2004.

The acronym stands for Workshop on Industry and Labour Dynamics – The Agent-based Computational Economics Approach, and was introduced with the first wild@ace conference in 2003. This event also led to the publication of a proceedings volume (Leombruni and Richiardi, 2004).

The wild@ace events are the first and only ones in the scientific community with such a double focus, both with respect to the topics and to the methodology. Agent-based models are computer models in which a multitude of agents - each embodied in a specific software code - interacts. These agents can represent individuals, households, firms, institutions, etc. The aggregate behavior of the system is then reconstructed “from the bottom up”, by simple arithmetic computation (see Tesfatsion, 2005) .

While agent-based simulations have commanded a growing interest in the recent years, since the seminal work conducted at the Santa Fe Institute in the early 90’s, most events worldwide have focused so far on their methodological status, with examples of applications coming from many different fields, from biology to sociology, from physics to economics. Indeed, this methodology appears to be particularly suited for the analysis of complex systems, where traditional, analytical models easily become intractable. Complex systems can in general be looked at from a number of complementary viewpoints, hence the call for interdisciplinary approaches.

However, at LABORatorio Revelli we are interested in the insights that the new methodology can give to the ‘old’ field of industrial organization and labor economics (see Leombruni and Richiardi, 2005). This approach has commanded a wide interest, since as Leigh Tesfatsion herself puts it, “industry and labor dynamics are two of the most promising avenues for future ACE researchers”.

The 2004 edition of wild@ace attracted a number of many internationally recognized scholars. The opening lecture was given by Richard Freeman from Harvard University (“Assessing Economic Institutions and Reforms the Artificial Agent Way”), followed by John Rust from the University of Maryland (“The Curse of Dimensionality and How to Circumvent it”). Other keynote speakers included Sorin Solomon, a professor of theoretical physics at the Hebrew University of Jerusalem and director of the Complexity program at ISI Foundation in Torino (“[On Wealth, Power and Law; Are Rich People Smarter](#)”), Masanao Aoki from UCLA (“A new approach to labor market dynamics; Okun's law, Beveridge curve, and transient dynamics”), Massimo Egidi from the University of Trento (“Adaptive dynamics on rugged landscapes”) and Dirk Helbing from the Dresden University of Technology (“Network-Induced Oscillatory Behaviour of Macroeconomic Output Flows”).

A number of thematic parallel sessions followed, focused on the theory of matching, firm dynamics and the theory of networks and clusters. Two special sessions were organized on simulation-based estimation and on microsimulation.

The conference was also the occasion for the first presentation of Labor Sim, the new microsimulation model of participation rates developed at the LABORatorio for the Italian Welfare Ministry. The other microsimulation models presented were the one developed in Pisa by Bianchi et al., with a specific focus on fiscal policies and retirement decisions, and the one developed at CERP, mainly concerned with the individual effects of the reforms of the pension system.

This volume includes most of the papers presented at the workshop, revisited and corrected. They are organized in four parts. Part 1 deals with the modelling of the labour market, i.e. the behaviour of workers and firms; part 2 is devoted to investigation of the business cycle and other industrial dynamics features of the economy; part 3 is devoted to microsimulations, while part 4 focuses on network-related issues.

References

Leombruni R., Richiardi M. eds. (2004), *Industry and Labor Dynamics: The Agent-based Computational Economics Approach. Proceeding of the Wild@Ace 2003 conference*, World Scientific Press, Singapore

Leombruni R., Richiardi M. (2005), *Why Are Economists Sceptical About Agent-Based Simulations?*, Physica A

Tesfatsion L., "Agent-Based Computational Economics: A Constructive Approach to Economic Theory", in *Handbook of Computational Economics. Volume 2: Agent-Based Computational Economics*, North-Holland, 2005