Admissions decisions will be made and announced by 30 April 2009. All applicants will be informed by e-mail about the results.

Participation at the summer school is free of charge. Participants will be provided with full board and lodging for the two-weeks period of the summer school (meals during the weekend and travel expenses are due to the participants). Note: students are required to attend the entire two weeks of the school.

A limited amount of travel grants are available for applicants from outside Western and Northern Europe and North America. A request of travel grant together with the motivational letter should be submitted together with the application.

For logistical questions and application forms please contact the Summer School secretary at ccschool@economia.unitn.it or consult our web page at http://www-ceel.economia.unitn.it



This is the Tenth of a series of intensive courses to be offered by the Computable and Experimental Economics Laboratory (CEEL) with the financial support of John S. Latsis Public Benefit Foundation.

Previous courses were offered in Computable Economics (2000, Professor K. Vela Velupillai), Experimental Economics (2001, Professor Daniel Friedman), Adaptive Economic Processes (2002, Professor Peter Howitt), Behavioral Economics (2003, Professors Daniel Friedman and David Laibson), Institutional Economics (2004, Professor Richard N. Langlois), Evolutionary Economic Dynamics (2005, Professors Ken Binmore and Larry Samuelson), Agent-Based Computational Economics (2006, Professors Leigh Tesfatsion and Robert Axtell), Agent-Based Finance (2007, Professors Cars Hommes and Thomas Lux), and Financial Instability and Crises (2008, Professors Domenico Delli Gatti and Mauro Gallegati).

Computable and Experimental Economics Laboratory (CEEL)

Dipartimento di Economia - Università degli Studi di Trento Via Inama 5, 38100 Trento (ITALY)

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## **Summary of the Course**

Both network analysis and innovation studies are thriving fields, but have not always been integrated, in spite of the acknowledged importance of each to the other. Economic, political and scientific innovations occur in distributed networks of participants collaborating with each other. And social and biological networks of all types are evolving and dynamic, even if data about them often come as snapshots. The purposes of the summer school are to use network analysis to better understand the generation and diffusion of innovations, to use insights from innovation studies to develop models of network dynamics, and to develop the science of the co-evolution of networks and innovations.

The summer school at Trento is simultaneously a school, teaching contemporary theories and methods, and a workshop, wherein participants, both faculty and students, develop research and ideas to advance this frontier. The school is a call to the community of present and future researchers interested in pursuing this objective.

Across diverse application areas, the research questions asked will include:

- what are social mechanisms of recombination and learning?
- what are system dynamics of emergence and tipping?

Application topics will include:

- Santa Fe Institute style models of autocatalytic network in biological evolution
- Organizational invention in Renaissance Italy
- Innovation in the Life Sciences
- Innovation in the computer industry.

Specific methods in network analysis (e.g., structural cohesion, small worlds, diffusion and contagion, dynamical systems) will be covered in the context of the application areas in which they are used. Background readings will be drawn in part from a forthcoming book by Padgett and Powell, entitled "The Emergence of Organizations and Markets."

The course will be taught by **Professors John Padgett**, University of Trento and University of Chicago, **Woody Powell**, Stanford University, **Lee Fleming**, Harvard Business School, and **Massimo Riccaboni**, University of Trento, with visiting lecturers by Professors **James Evans**, University of Chicago, **Sanjeev Goyal**, University of Cambridge, and **Fernando Vega-Redondo**, European University Institute.

In addition to overview lectures in the mornings, the school will feature intensive seminar-style discussions in the afternoons of participants' research. Applicants therefore need to include statements about their current or projected research, along with relevant research papers, if any.

This course is the tenth of a series in Adaptive Economic Dynamics offered by the Computable and Experimental Economics Laboratory of the University of Trento (CEEL), with the financial support of John S. Latsis Public Benefit Foundation. Previous intensive courses were offered in:

Computable Economics (2000): Professor Kumaraswamy Vela Velupillai of the University of Trento with guest lecture appearances by Professors Daniel Heymann, Scott Kelso and Francesco Luna.

Experimental Economics (2001): Professor Daniel Friedman of the University of California, Santa Cruz with guest lecture appearances by Professors Massimo Egidi, Peter Howitt, Steffen Huck, Rosemarie

Nagel and Reinhard Selten.

**Adaptive Economic Processes** (2002): Professor Peter Howitt of Brown University with guest lecture appearances by Professors Masanao Aoki, Jasmina Arifovic, Robert Axtell, Richard Day and Seppo Honkapohja.

**Behavioral Economics** (2003): Professors Daniel Friedman of the University of California, Santa Cruz and David Laibson of Harvard with guest lecture appearances by Professors Colin Camerer, Stefano Della Vigna, Massimo Egidi, Ernst Fehr, George Loewenstein and Ulrike Malmendier.

**Institutional Economics** (2004): Professor Richard N. Langlois of the University of Connecticut with guest lecture appearances by Professors Meir Kohn, Ugo Pagano, Scott E. Page, Nicolaas J. Vriend, Enrico Zaninotto, Junfu Zhang.

**Evolutionary Economic Dynamics** (2005): Professors Ken Binmore of the University College, London and Larry Samuelson of the University of Wisconsin with guest lecture appearances by Professors Giovanni Dosi, Dan Friedman, Peter Howitt, Axel Leijonhufvud and Richard Nelson.

**Agent–Based Computational Economics** (2006): Professors Leigh Tesfatsion, Iowa State University and Robert Axtell, The Brookings Institution, with guest lecturer appearances by Professors John Duffy, Dan Friedman, Mauro Gallegati, Herbert Gintis, Peter Howitt, and Axel Leijonhufvud.

**Agent–Based Finance** (2007): Professors Cars Hommes, University of Amsterdam and Thomas Lux, University of Kiel, with guest lecturer appearances by Professors Jasmina Arifovic, Doyne Farmer, Klaus Rainer Schenk–Hoppé, Attilio Stella, Shyam Sunder.

Financial Instability and Crises (2008): Professors Domenico Delli Gatti, Università Cattolica del Sacro Cuore di Milano and Mauro Gallegati, Università Politecnica delle Marche, Ancona, with guest lecturer appearances by Professors Stefano Battiston, Michael Bordo, Claudio Borio, Edoardo Gaffeo, Axel Leijonhufvud, Didier Sornette, Roberto Tamborini, and Gianni Toniolo.

## **Application Procedure**

Persons interested in participating in the Summer School should submit the following:

- the electronic application form
- a detailed Curriculum Vitae
- a two-page essay describing their interest in Networks and Innovation
- a course transcript from their Ph.D program including advanced examinations passed
- two letters of recommendation
- statements about their current or projected research, along with relevant research papers, if any

The Trento Summer Schools are intended for Ph.D students and post-doctoral scholars. Please send all the above documents and information to Prof. Enrico Zaninotto We encourage electronic submissions (pdf format): ccschool@economia.unitn.it

## Prof. Enrico Zaninotto

Facoltà di Economia Università degli Studi di Trento Via Inama 5, 38100 Trento (ITALY) Fax: 0039 0461 882222

The deadline for application is 24 April 2009