

Analysis of Innovation and Competition Processes

Milano (Italy), Palazzo delle Stelline, May 16-18, 2005

International scientific course

organized by



SICC - Italian Society for Chaos and Complexity



DEI - Department of Electronics and Information
Politecnico di Milano

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Fondazione
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FEEM - Fondazione Eni Enrico Mattei



IIASA - International Institute for Applied Systems Analysis

The aim of the course is to present the mathematical approaches for modeling evolutionary change, which results from innovation and competition processes, such as genetic mutations and demographic competition in biological systems. Such approaches necessarily sacrifice many details, but go far beyond biology, since culture, behavioral strategies, companies, goods, technology, and many other artificial agents often evolve by means of slight innovations and compete with the other agents of the system.

Emphasis will be given to Evolutionary game theory and Adaptive dynamics, and several applications in biology and social sciences will be discussed in detail.

The course is addressed to Ph.D. students and scientists interested in the field of evolutionary dynamics. Only undergraduate skill in mathematics is required. All basic notions of linear and nonlinear dynamical systems and bifurcation theory will be introduced.

The course will be held at

FEEM - Fondazione Eni Enrico Mattei
Palazzo delle Stelline, Corso Magenta 63, 20123 Milano (Italy)

The lectures will be given by

Fabio Dercole¹ (Director of the course)

Ulf Dieckmann²

Stefano Maggi¹

Sergio Rinaldi^{1,2}

Karl Sigmund^{2,3}

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Further informations, including the program, application instructions, and housing facilities are available at

<http://www.elet.polimi.it/corsi/aicp2005>