



European Conference on Iteration Theory
September 09-15, 2012
Ponta Delgada, Portugal

Forewords

The European Conference on Iteration Theory, ECIT 2012, has been held on September 2012, 09-15, in the city of Ponta Delgada, on the island of São Miguel, archipelago of Azores, Autonomous Region of Portugal. It was organized at "Hotel Açores Atlântico", in Ponta Delgada, Azores, by the Department of Mathematics of the University of Azores, and by the "Centro de Matemática Aplicada e Tecnologias de Informação" (CMATI), with the help of the Regional Azores Government, the City Hall of Ponta Delgada, and the University of Azores. ECIT 2012 followed the sequence of meetings started in Toulouse 1973 and continued in Graz, Austria, 1977, Marburg, Germany, 1980, Toulouse, France, 1982, Lochau, Austria, 1984, Caldes de Malavella, Spain, 1987, Batschuns, Austria, 1989, Lisboa, Portugal, 1991, Batschuns, Austria, 1992, Opava, Czech Republic, 1994, Urbino, Italy, 1996, Muszyna, Poland, 1998, La Manga del Mar Menor, Spain, 2000, Evora, Portugal, 2002, Batschuns, Austria, 2004, Gargnano, Italy, 2006, Yalta, Ukraine, 2008, and Nant, France 2010.

The main topic of ECIT is iteration theory. This theory is a branch of mathematics and includes topics related to discrete dynamical systems and functional equations. The aim of these theoretical studies is to model, analyze and understand iterative process, for example, systems with discrete time. Such systems can be obtained from many different fields of application: engineering (control theory, electronics,...), physics, mechanics, economics, biology, ecology, ...

All these questions have given rise to the introduction and the development of several branches of mathematics, related with the iteration theory, as, for instance:

- Theory of singularities
- Bifurcation theory
- Dynamical systems with small perturbations
- Topological dynamics
- Ergodic theory
- Symbolic dynamics
- Embedding problems
- Iteration theory, in particular also iteration groups and semi-groups
- Iterative and linear functional equations

In this ECIT 2012 conference, there were 66 participants, issued from many different countries including Austria, Czech Republic, France, Germany, Israel, Italy, Poland, Portugal, Russia, Slovakia, Spain, Tunisia and Ukraine. Fifty nine talks have been given and there were many very fruitful exchanges and discussions during the special sessions "Problems and remarks" and during the whole conference.

The present issue of ESAIM Proceedings gathers 19 contributions by participants to the ECIT 2012 conference. These papers are related to the different thematics, which have been proposed during the conference, among them, symbolic dynamics, dynamical systems, functional equations, bifurcation theory,... We thank all authors for their contribution to this issue of ESAIM Proceedings.

The guest editors,
Witold Jarczyk, Daniele Fournier-Prunaret, João Manuel Gonçalves Cabral

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