

Preface

This volume contains the papers presented at the 4th International Conference on the Theory and Practice of Natural Computing (TPNC 2015), held in Mieres, Spain during December 15–16, 2015.

The scope of TPNC is rather broad, containing topics of theoretical, experimental, or applied interest. The topics include but are not limited to:

- Theoretical contributions to: amorphous computing; artificial chemistry; artificial immune systems; artificial life; bacterial foraging; cellular automata; chaos and dynamical systems-based computing; complex adaptive systems; computing with DNA; computing with words; developmental systems; evolutionary computing; fractal geometry; gene assembly in unicellular organisms; granular computation; intelligent systems; membrane computing; nanocomputing; neural computing; optical computing; physarum computing; quantum computing and quantum information; reaction-diffusion computing; rough/fuzzy computing in nature; self-organizing systems; swarm intelligence; synthetic biology.
- Applications of natural computing to: algorithms; bioinformatics; control; cryptography; design; economics; graphics; hardware; human–computer interaction; knowledge discovery; learning; logistics; medicine; natural language processing; optimization; pattern recognition; planning and scheduling; programming; robotics; telecommunications; Web intelligence.

There were 30 submissions. The committee decided to accept 12 papers, which represents an acceptance rate of 40 %. The program of the conference also included three invited talks.

Part of the success in the management of the submissions and reviews is due to the excellent facilities provided by the EasyChair conference management system.

We would like to thank all invited speakers and authors for their contributions, the Program Committee and the external reviewers for their cooperation, the European Centre for Soft Computing for the excellent facilities put at our disposal, and Springer for its very professional publishing work.

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