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Parallel Problem Solving from Nature - PPSN IX

9th International Conference
Reykjavik, Iceland, September 9-13, 2006
Proceedings

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Preface

We are very pleased to present this LNCS volume, the proceedings of the 9th International Conference on Parallel Problem Solving from Nature (PPSN IX). PPSN is one of the most respected and highly regarded conference series in evolutionary computation and natural computing / computation. This biennial event was first held in Dortmund in 1990, and then in Brussels (1992), Jerusalem (1994), Berlin (1996), Amsterdam (1998), Paris (2000), Granada (2002), and Birmingham (2004). PPSN continues to be the conference of choice by researchers all over the world, who value its high quality.

We received 255 paper submissions this year. After an extensive peer review process involving more than 1000 reviews, the programme committee selected the top 106 papers for inclusion in this volume and, of course, for presentation at the conference. This represents an acceptance rate of 42%.

The papers included in this volume cover a wide range of topics, from evolutionary computation to swarm intelligence and from bio-inspired computing to real-world applications. They represent some of the latest and best research in evolutionary and natural computation. Following the PPSN tradition, all papers at PPSN IX were presented as posters. There were 7 sessions: each session consisting of around 15 papers. For each session, we covered as wide a range of topics as possible so that participants with different interests could find some relevant papers in every session.

The conference featured three distinguished keynote speakers: Herschel Rabitz, Nadia Busi, and Edward Tsang. Their backgrounds in chemistry, theoretical computer science, and financial engineering, respectively, reflect the interdisciplinary nature of PPSN IX. Herschel Rabitz's talk was on "Controlling Quantum Phenomena: The Dream Is Alive", Nadia Busi's was on "Computing with Calculi and Systems Inspired by Biological Membranes", and Edward Tsang's was on "Wind-tunnel Testing for Strategy and Market Design". Both Edward Tsang and Nadia Busi gave introductory tutorials related to their talks. Furthermore, Nadia Busi is the co-author of some notes on (Mem)Brane Computation included in this volume. We are very grateful to them for contributing valuable time from their busy schedules.

PPSN IX included 10 tutorials and 4 workshops. We were extremely fortunate to have such an impressive list of internationally leading scientists from across natural computing as tutorial speakers. They provided an excellent start to the five-day event. The workshops offered an ideal opportunity for participants to explore specific topics in natural computing in an informal setting. They were sowing the seeds for the future growth of natural computing.

To encourage and reward high-quality research in the international community, PPSN IX presented a Best Paper Award. All accepted papers were eligible

to enter the competition. A separate Best Student Paper Award was also given at the conference.

The success of a conference depends on its authors, reviewers and organizers. PPSN IX was no exception. We are grateful to all the authors for their paper submissions and to all the reviewers for their outstanding work in refereeing the papers within a very tight schedule. We relied heavily upon a team of volunteers to keep the PPSN IX wheel turning. We are very grateful for their efforts.

September 2006

Thomas Philip Runarsson

Hans-Georg Beyer

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