Preface

In this volume we present the accepted contributions for the 7th European Conference on Genetic Programming (EuroGP 2004). The conference took place on 5–7 April 2004 in Portugal at the University of Coimbra, in the Department of Mathematics in Praça Dom Dinis, located on the hill above the old town.

EuroGP is a well-established conference and the sole one exclusively devoted to Genetic Programming. Previous proceedings have all been published by Springer-Verlag in the LNCS series. EuroGP began as an international workshop in Paris, France in 1998 (14–15 April, LNCS 1391). Subsequently the workshop was held in Göteborg, Sweden in 1999 (26–27 May, LNCS 1598) and then EuroGP became an annual conference: in 2000 in Edinburgh, UK (15–16 April, LNCS 1802), in 2001 at Lake Como, Italy (18–19 April, LNCS 2038), in 2002 in Kinsale, Ireland (3–5 April, LNCS 2278), and in 2003 in Colchester, UK (14–16 April, LNCS 2610). From the outset, there have always been specialized workshops, co-located with EuroGP, focusing on applications of evolutionary algorithms (LNCS 1468, 1596, 1803, 2037, 2279, and 2611). This year the EvoCOP workshop on combinatorial optimization transformed itself into a conference in its own right, and the two conferences, together with the EvoWorkshops, EvoBIO, EvoIASP, EvoMUSART, EvoSTOC, EvoHOT, and EvoCOMNET, now form one of the largest events dedicated to Evolutionary Computation in Europe.

Genetic Programming (GP) is evolutionary computation that solves specific complex problems or tasks by evolving and adapting a population of computer programs, using Darwinian evolution and Mendelian genetics as its sources of inspiration. Some of the 38 papers included in these proceedings address foundational and theoretical issues, and there is also a wide variety of papers dealing with different application areas, such as computer science, engineering, language understanding, biology and design, demonstrating that GP is a powerful and practical problem-solving paradigm.

A total of 61 papers were received. A rigorous, double-blind, peer-review selection mechanism was applied to 58 of them. This resulted in 19 plenary talks (31% of those submitted) and 19 research posters. Every paper was reviewed by at least two of the 46 members of the program committee who were carefully selected internationally for their knowledge and competence. As far as possible, papers were matched with the reviewer's particular interests and special expertise. The result of this careful process can be seen here in the high quality of the contributions published within this volume.

Of the 38 accepted papers, 32 have authors who came from European countries (about 85%), confirming the strong European character of the conference. The other 6 came from the USA, Korea, China, New Zealand, and Australia, emphasizing the global nature of our field.

We would like to express our sincere thanks especially to the two internationally renowned speakers who gave keynote talks at the joint conference and workshops plenary sessions: Prof. Stephanie Forrest of the University of New Mexico, and Prof. Zbigniew Michalewicz of the University of North Carolina.

The success of any conference results from the efforts of many people, to whom we would like to express our gratitude. First, we would like to thank the members of the program committee for their attentiveness, perseverance, and willingness to provide high-quality reviews. We would especially like to thank Jennifer Willies who ensured the conference's continued existence and has been greatly influential in sustaining the high quality of the conference organization. Without Jennifer, we would have been lost. Last but not least, we thank the University of Coimbra for hosting the conference.

April 2004

Maarten Keijzer
Una-May O'Reilly
Simon Lucas
Ernesto Costa
Terence Soule

Organization

EuroGP 2004 was organized by EvoGP, the EvoNet Working Group on Genetic Programming.

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