Triangular Urchin (an Iterated Functions System of 2 polar functions) emerged from an urchin structure after a few generations using ArtiE-Fract. The evolutionary process was only based on soft mutations, some of them directly induced by the author.
Volume Editors

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Evolutionary computation (EC) involves the study of problem-solving and optimization techniques inspired by principles of natural evolution and genetics. EC has been able to draw the attention of an increasing number of researchers and practitioners in several fields. Evolutionary algorithms have in particular been shown to be effective for difficult combinatorial optimization problems appearing in various industrial, economics, and scientific domains.

This volume contains the proceedings of EvoCOP 2005, the 5th European Conference on Evolutionary Computation in Combinatorial Optimization. It was held in Lausanne, Switzerland, on 30 March–1 April 2005, jointly with EuroGP 2005, the 8th European Conference on Genetic Programming, and the EvoWorkshops 2005, which consisted of the following six individual workshops: EvoBIO, the 3rd European Workshop on Evolutionary Bioinformatics; EvoCOMNET, the 2nd European Workshop on Evolutionary Computation in Communication, Networks, and Connected Systems; EvoHOT, the 2nd European Workshop on Hardware Optimisation Techniques; EvoIASP, the 7th European Workshop on Evolutionary Computation in Image Analysis and Signal Processing; EvoMUSART, the 3rd European Workshop on Evolutionary Music and Art; and EvoSTOC, the 2nd European Workshop on Evolutionary Algorithms in Stochastic and Dynamic Environments.

EvoCOP, held annually as a workshop since 2001, became a conference in 2004 and it is now the premier European event focusing on evolutionary computation in combinatorial optimization. The events gave researchers an excellent opportunity to present their latest research and to discuss current developments and applications, besides stimulating closer future interaction between members of this scientific community. Accepted papers of previous events were published by Springer in the series Lecture Notes in Computer Science (LNCS volumes 2037, 2279, 2611, and 3004).

The double-blind reviewing process resulted in a strong selection among the submitted papers; the acceptance rate was 36.4%. All accepted papers were presented orally at the conference and are included in this proceedings volume. We would like to give credit to the members of our Program Committee, to whom we are very grateful for their quick and thorough work.

<table>
<thead>
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<th>EvoCOP</th>
<th>submitted</th>
<th>accepted</th>
<th>acceptance ratio</th>
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<tr>
<td>2001</td>
<td>31</td>
<td>23</td>
<td>74.2%</td>
</tr>
<tr>
<td>2002</td>
<td>32</td>
<td>18</td>
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<tr>
<td>2003</td>
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<td>19</td>
<td>48.7%</td>
</tr>
<tr>
<td>2004</td>
<td>86</td>
<td>23</td>
<td>26.7%</td>
</tr>
<tr>
<td>2005</td>
<td>66</td>
<td>24</td>
<td>36.4%</td>
</tr>
</tbody>
</table>
EvoCOP 2005 covers evolutionary algorithms as well as related approaches like scatter search, simulated annealing, ant colony optimization, immune algorithms, variable-neighborhood search, hyperheuristics, and estimation of distribution algorithms. The papers deal with representations, analysis of operators and fitness landscapes, and comparison of algorithms. The list of studied combinatorial optimization problems includes prominent examples like graph coloring, quadratic assignment, the knapsack problem, graph matching, packing, scheduling, timetabling, lot-sizing, and the traveling-salesman problem.

For the first time, EvoCOP used a conference management system, VSIS ConfTool 1.1.2, to handle paper submissions and the reviewing process. Harald Weinreich and his team, who developed this software and made it available to us, deserve our gratitude for this open-source project that saved us a lot of time. We would like to thank Philipp Neuner for administrating the conference management system.

Finally, many thanks go to Jennifer Willies, who cared about the administration and coordination of EuroGP 2005, EvoCOP 2005, and the EvoWorkshops 2005, for her tremendous efforts.

March 2005

Günther R. Raidl

Jens Gottlieb
Organization

EvoCOP 2005 was organized jointly with EuroGP 2005 and the EvoWorkshops 2005.

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