ALGORITHMS OF INFORMATICS
vol. 1. Foundations, vol. 2. Applications
Editor: Antal Iványi

monAt Kiadó (http://www.mondat.hu), Budapest, 2007.
Distributor: AnTonCom (http://www.antoncom.hu/)
ISBN 978-963-87596-1-0, ISBN 978-963-87596-2-7

The chapters of the first volume are divided into three parts. The chapters of Part 1 are connected with automata: *Automata and Formal Languages* (written by Zoltán Kása, Babeş-Bolyai University of Cluj-Napoca), *Compilers* (Zoltán Csörnyei, Eötvös Loránd University), *Compression and Decompression* (Ulrich Tamm, Chemnitz University of Technology Commitment), *Reliable Computations* (Péter Gács, Boston University).

The chapters of Part 2 have algebraic character: here are the chapters *Algebra* (written by Gábor Ivanyos, and Lajos Rónyai, Budapest University of Technology and Economics), *Computer Algebra* (Antal Járai, Attila Kovács, Eötvös Loránd University), further *Cryptology* and *Complexity Theory* (Jörg Rothe, Heinrich Heine University).

The chapters of the third part contain *Competitive Analysis* (Csanád Imreh, University of Szeged), *Game Theory* (Ferenc Szidarovszky, The University of Arizona), *Recurrences* (Zoltán Kása, Babeş-Bolyai University) and *Scientific Computations* (Aurél Galántai, András Jeney, University of Miskolc).

The second volume is also divided into three parts. The chapters of Part 4 are *Distributed Algorithms* (Burkhard Englert, California State University; Dariusz Kowalski, University of Liverpool; Grzegorz Malewicz, University of Alabama; Alexander Allister Shvartsman, University of Connecticut), *Parallel Computation* (Antal Iványi, Eötvös Loránd University; Claudia Leopold, University of Kassel), *Network Simulation* (Tibor Gyires, Illinois State University) and *Systolic Systems* (Eberhard Zehendner, Friedrich Schiller University).

The chapters of Part 5 are *Relational Databases* and *Query in Relational Databases* (János Demetrovics, Eötvös Loránd University; Attila Sali, Alfréd Rényi Institute of Mathematics), *Semistructured Data Bases* (Attila Kiss, Eötvös Loránd University) and *Memory Management* (Ádám Balog, Antal Iványi, Eötvös Loránd University).

The chapters of the third part of the second volume have close connections with biology: *Bioinformatics* (István Miklós, Eötvös Loránd University), *Human-Computer Interactions* (Ingo Althöfer, Stefan Schwarz, Friedrich Schiller University), and *Computer Graphics* (László Szirmay-Kalos, Budapest University of Technology and Economics).

The book contains verbal description, pseudocode and analysis of over 200 algorithms, and over 350 figures and 120 examples illustrating how the algorithms work. Each section ends with exercises and each chapter ends with problems. The book contains over 330 exercises and 70 problems.

The book has a web site: http://elek.inf.elte.hu/EnglishBooks, which can be used to obtain a list of known errors, report errors, or make suggestions. The website contains the maintaned PDF version of the bibliography in which the names of the authors, journals and publishers are usually active links to the corresponding web sites.

INSIGHT INTO COMPUTER SCIENCE WITH MAPLE
Zoltán Benyó, Béla Paláncz, László Szilágyi
Scientia Publishing House (http://www.scientiakiado.ro), Cluj-Napoca, 2005.
ISBN: 978-973-7953-56-8

The purpose of the book is to provide a systematic overview of the different areas of computer science with the help of integrated systems like Maple, Mathematica and Mathcad. These are popular representatives of integrated systems providing a new philosophy for using computers in teaching, research and industry. Definitions, principles, methods, techniques and applications illustrated by interactive examples are presented.

Contents: Problems, algorithms and programs, Data structures, Numerical algorithms, Simulation (of the dynamical performance of linear and non-linear syustems), Control (for linear and non-linear systems), Graphs and their applications, Neural networks, Computer graphics, Computer animation, Image processing.

Most of the chapters conclude with exercises.

The book is written basically as a second year text for students in science and engineering, who already have some knowledge of programming and in working with Maple, Mathematica or Mathcad. However, it could be a first year text for mathematics students or students in computer science, who generally acquire skills in these type of packages (early computing/electronics courses that traditionally use C, C++, Java) or some other high level languages in their first year, and could easily acquire the required level of skill in one of these systems in their second year.

This book can also be a helpful source of reference for postgraduate students.