

Table of Contents

The Web

...How to Make the Best Use of It

The Web in 2010: Challenges and Opportunities for Database Research ...	1
<i>Gerhard Weikum</i>	

Challenges in Ubiquitous Data Management	24
<i>Michael J. Franklin</i>	

...What's Underneath

Programmable Networks	34
<i>Andrew T. Campbell, Michael E. Kounavis, John B. Vicente</i>	

...How to Still Feel Secure

Multilateral Security: Enabling Technologies and Their Evaluation	50
<i>Andreas Pfitzmann</i>	

Cryptography 2000±10	63
<i>Ueli Maurer</i>	

A Language-Based Approach to Security	86
<i>Fred B. Schneider, Greg Morrisett, Robert Harper</i>	

Software

...the Right Engineering

Software Engineering in the Years 2000 Minus and Plus Ten	102
<i>Jochen Ludewig</i>	

Thinking Tools for the Future of Computing Science	112
<i>Cliff B. Jones</i>	

Orientations in Verification Engineering of Avionics Software	131
<i>Famantanantsoa Randimbivololona</i>	

...the Right Tooling

Abstract Interpretation Based Formal Methods and Future Challenges ...	138
<i>Patrick Cousot</i>	

Extended Static Checking: A Ten-Year Perspective	157
<i>K. Rustan M. Leino</i>	

Progress on the State Explosion Problem in Model Checking	176
<i>Edmund Clarke, Orna Grumberg, Somesh Jha, Yuan Lu, Helmut Veith</i>	

A Political Issue: Open Source?

From Research Software to Open Source	195
<i>Susan L. Graham</i>	

Architecture

Microprocessors — 10 Years Back, 10 Years Ahead	209
<i>Gurindar S. Sohi</i>	

The Quantum Computing Challenge	219
<i>Paul Vitányi</i>	

Parallel Computation: MM +/- X	234
<i>Lawrence Snyder</i>	

Theory

... Why It Is Needed

Computational Complexity and Mathematical Proofs	251
<i>Juris Hartmanis</i>	

Logic for Computer Science: The Engineering Challenge	257
<i>Wolfgang Thomas</i>	

... How It Becomes Practice

From Algorithm to Program to Software Library	268
<i>Kurt Mehlhorn</i>	

Artificial Intelligence

Pervasive Speech and Language Technology	274
<i>Wolfgang Wahlster</i>	

Embodied Artificial Intelligence: 10 Years Back, 10 Years Forward	294
<i>Rolf Pfeifer</i>	

Graphics and Vision

Scientific Visualization - Methods and Applications -	311
<i>Hans Hagen, Achim Ebert, Rolf Hendrik van Lengen, Gerik Scheuermann</i>	

Computer Vision: Past and Future	328
<i>Jan-Olof Eklundh and Henrik I. Christensen</i>	

Immersion into Other Disciplines

Computational Biology at the Beginning of the Post-genomic Era	341
<i>Thomas Lengauer</i>	

Computer Science in Physics	356
<i>A. Peter Young</i>	

Author Index	369
---------------------------	-----



<http://www.springer.com/978-3-540-41635-7>

Informatics

10 Years Back. 10 Years Ahead

Wilhelm, R.

2001, IX, 372 p., Softcover

ISBN: 978-3-540-41635-7