## Contents

**EATCS Bulletin**

**Number 47, June 1992**

1. **EATCS Matters**
   - Letter from the President and Bulletin Editor ........................................ 1
   - The Gödel Prize ......................................................................................... 2
   - The French Chapter (by B. Rozoy) .......................................................... 4

2. **ICALP '92** ............................................................................................. 33

3. **Contents of TCS** ..................................................................................... 41

4. **EATCS Monographs** ................................................................................ 50

5. **Sister Organizations**
   - FACS from the UK (by D. Simpson) ......................................................... 64
   - The Teaching Company Directorate (by E.H. Robson) .............................. 70

6. **ESPRIT – Basic Research Actions**
   - The response to the call (by G. Metakides) .............................................. 72
   - CEDISYS (by U. Montanari) ....................................................................... 82
   - COMPASS (by B. Krieg-Brückner and D. Plump) ....................................... 87
   - COMPUGRAPH (by H. Ehrig and M. Löwe) .............................................. 91
   - DEMON (by E. Best) .................................................................................. 94
   - PDCS (by B. Randell and J.-C. Laprie) ...................................................... 99
   - SPEC (by W.-P. de Roever) ................................................................. 105
   - CONCUR (by E. Madelaine) ............................................................... 110

7. **Institutional Sponsors** ........................................................................... 128

8. **News from Australia** (by J. Staples) ....................................................... 129

9. **News from Japan** (by S. Miyano) ............................................................. 133

10. **Columns**
    - H. Ehrig: The Algebraic Specification Column
      Some important new facts supporting the development of algebraic specifications
      (by H. Ehrig) ....................................................................................... 135
    - Towards an algebraic specification framework for the VLSI design process
      (by P.S. Subramanian) ......................................................................... 137
    - J. Hartmanis: The Structural Complexity Column
      Relativization: a revisionistic retrospective (by J. Hartmanis, R. Chang, S. Chari, D. Ranjan, P. Rohatgi) ................................................................. 144
    - A. Salomaa: The Formal Language Theory Column
      What Emil said about the Post correspondence problem .......................... 154
### Technical Contributions

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Arnold, A. Dicky, M. Nivat</td>
<td>A note about minimal non-deterministic automata</td>
<td>166</td>
</tr>
<tr>
<td>D. Kozen</td>
<td>On the Myhill–Nerode theorem for trees</td>
<td>170</td>
</tr>
<tr>
<td>V. Mitran</td>
<td>Valence grammars on a free generated group</td>
<td>174</td>
</tr>
<tr>
<td>H. Prodinger</td>
<td>Some analytic techniques for the investigation of the asymptotic behaviour of tree parameters</td>
<td>180</td>
</tr>
<tr>
<td>A. Renvall</td>
<td>ANDOS: A simple protocol for secret selling of secrets</td>
<td>200</td>
</tr>
<tr>
<td>F. Urbanek</td>
<td>A note on the language operator “red”</td>
<td>205</td>
</tr>
<tr>
<td>J.P.M. de Vreught</td>
<td>Maximal derivation lengths of acyclic CFGs</td>
<td>206</td>
</tr>
</tbody>
</table>

### Educational Matters (by H.-J. Kreowski)

<table>
<thead>
<tr>
<th>Conference</th>
<th>Details</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar on Structure and Complexity Theory</td>
<td>Schloß Dagstuhl, Germany, 2–8 February 1992 (report by P. van Emde Boas)</td>
<td>217</td>
</tr>
<tr>
<td>Ninth Symposium on Theoretical Aspects of Computer Science (STACS '92)</td>
<td>Cachan, France, 13–15 February 1992 (report by M. Kudlek)</td>
<td>221</td>
</tr>
<tr>
<td>Fourth European Symposium on Programming (ESOP '92)</td>
<td>Rennes, France, 26–28 February 1992 (report by A. Tarlecki)</td>
<td>225</td>
</tr>
<tr>
<td>Eighth British Colloquium on Theoretical Computer Science, Newcastle upon Tyne, United Kingdom</td>
<td>24–26 March 1992 (report by A. Gibbons)</td>
<td>231</td>
</tr>
<tr>
<td>Latin American Theoretical Informatics (LATIN '92)</td>
<td>São Paulo, Brazil, 6–10 April 1992 (report by K.W. Wagner)</td>
<td>240</td>
</tr>
</tbody>
</table>

### Conference Announcements

<table>
<thead>
<tr>
<th>Conference</th>
<th>Details</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Workshop on Computer-Aided Verification (CAV '92)</td>
<td>Montreal, Canada, 29 June–1 July 1992</td>
<td>248</td>
</tr>
<tr>
<td>3rd Scandinavian Workshop on Algorithm Theory (SWAT '92)</td>
<td>Helsinki, Finland, 8–10 July 1992</td>
<td>259</td>
</tr>
<tr>
<td>Conference on Logic Programming and Automated Reasoning (LPAR '92)</td>
<td>St. Petersburg, Russia, 15–20 July 1992</td>
<td>766</td>
</tr>
<tr>
<td>Symposium on Logical Foundations of Computer Science (LFCS '92)</td>
<td>Tver, Russia, 20–24 July 1992</td>
<td>274</td>
</tr>
<tr>
<td>6th BANFF Higher Order Workshop, Banff, Canada</td>
<td>30 August–5 September 1992</td>
<td>303</td>
</tr>
<tr>
<td>3rd International Conference on Algebraic and Logic Programming (ALP '92)</td>
<td>Volterra, Pisa, Italy, 2–4 September 1992</td>
<td>310</td>
</tr>
<tr>
<td>Workshop on Rough Sets: state of the art and perspectives, Poznań, Poland</td>
<td>2–4 September 1992</td>
<td>317</td>
</tr>
<tr>
<td>2nd International Logic Programming Summer School (1 PSS '97)</td>
<td>Zurich, Switzerland, 7–11 September 1992</td>
<td>319</td>
</tr>
</tbody>
</table>
International Summer School of Constructive Algorithms, Hollum, Ameland, The Netherlands, 21 September–2 October 1992 .......................................................... 326
9th Workshop on Specification of Abstract Data Types, joint with the 4th COMPASS Workshop, Caldes de Malavella, Spain, 26–30 October 1992 .................. 331
Workshop on Approximation Algorithms, Delhi, India, 16–17 December 1992 .... 333
12th Conference on the Foundations of Software Technology and Theoretical Computer Science (FST&TCS), New Delhi, India, 18–20 December 1992 ........ 334
10th Symposium on Theoretical Aspects of Computer Science (STACS '93), Würzburg, Germany, 25–27 February 1993 ................................................................. 339
International Conference on Typed Lambda Calculi and Applications (TLCA), Utrecht, The Netherlands, 16–18 March 1993 .......................................................... 341
4th International joint Conference on the Theory and Practice of Software Development (TAPSOFT '93), Orsay, France, 13–17 April 1993 ................................. 342
1st Industrial Strength Formal Methods (FME '93), Odense, Denmark, 19–23 April 1993 .......................................................... 344
5th International Conference on Rewriting Techniques and Applications (RTA-93), Montreal, Canada, 16–18 June 1993 .......................................................... 345
14th International Conference on Application and Theory of Petri Nets (Petri Nets '93), Chicago, IL, U.S.A., 21–25 June 1993 .................................................. 346
Fundamentals of Computation Theory (FCT '93), Szeged, Hungary, 23–27 August 1993 .......................................................... 352
20th International Colloquium on Automata, Languages and Programming (ICALP '93), Lund, Sweden, 5–9 July 1993 .......................................................... 353

15. Agenda of Events .......................................................... 355

16. Reports on Computer Science Departments and Institutes
Theoretical Computer Science at McMaster University, Hamilton, Canada (by R. Janicki, T. Jiang, P.E. Lauer, W.F. Smyth, J. Zucker) ........................................ 363
Department of Computer Science, Meiji University, Kawasaki, Japan (by A. Nakamura) .......................................................... 367

17. Technical Reports and Publications
School of Computer Science, McGill University, Montreal, Canada .................. 372
Department of Computer Science, The Johns Hopkins University, Baltimore, MD, U.S.A. .......................................................... 376
Technical University of Berlin, Department of Computer Science/Formal Specification, Berlin, Germany .......................................................... 383
LaBRI, Department of Computer Science, University of Bordeaux, Bordeaux, France .......................................................... 393
Computer Science Department, Cornell University, Ithaca, NY, U.S.A. ............ 397

18. Abstracts of Ph.D. Theses
A.L. Bojados: Computational Complexity versus Structural Simplicity .............. 403
D.A. Chin: Complexity Issues in General-Purpose Parallel Computing ............ 405
M.M. Fokkinga: Law and Order in Algorithmics ........................................ 408
R. Gavaldá: Kolmogorov Randomness and its Applications to Structural Complexity Theory .......................................................... 410
L.A. Goldberg: Efficient Algorithms for Listing Combinatorial Structures ........ 412
V. Kann: On the Approximability of NP-complete Optimization Problems ......... 415
P. Pachkowski: Annotated Transition Systems for Verifying Concurrent Programs .......................................................... 418
P. Sestoft: Analysis and efficient implementation of Functional Programs .......... 422

K.R. Apt, E.-R. Olderog: Verification of Sequential and Concurrent Programs (review by D. Lucanu) .......................................................... 424
20. Moving Around ......................................................... 426

21. Miscellaneous
   A note (by W. Kuich and A. Salomaa) ............................. 426
   Obituary Renato Capocelli (by Z. Galil) .......................... 427
   New Department of Computer Science at the University of Rome, La Sapienza .......... 428
   A note from the Picture Editor (M. Kudlek) ........................ 428

22. EATCS Leaflet .......................................................... 429

23. Cartoons ................................................................. 3, 244, 362, 371