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# Modular Programming Languages

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**Volume Editors**

László Böszörmenyi  
Peter Schojer  
Universität Klagenfurt  
Fakultät für Wirtschaftswissenschaften und Informatik  
Universitätsstraße 65-67, 9020 Klagenfurt, Austria  
E-mail:{laszlo.boeszoermenyi,pschojer}@itec.uni-klu.ac.at

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# Preface

The mission of JMLC is to explore the concepts of well-structured programming languages and software, and those of teaching good design and programming style. A special interest is the construction of large and distributed software systems. JMLC – in the future it may be renamed to PMLC (Programming Methodology and Languages) – has already a long tradition; earlier conferences were held in 1987 (Bled, Slovenia), 1990 (Loughborough, UK), 1994 (Ulm, Germany), 1997 (Linz, Austria) and 2000 (Zürich, Switzerland).

JMLC 2003 attracted 47 papers from 10 countries (Australia, Austria, Czech Republic, Germany, Hungary, Italy, Switzerland, Russia, UK, USA). Each paper was reviewed by three representatives of the international program committee. Seventeen papers were accepted as full and 10 further papers as short contributions. In a second, simplified reviewing process the editors of this proceedings checked that all authors had accounted for the detailed comments of the reviewers.

In addition to the regular program, JMLC 2003 invited five distinguished speakers: Niklaus Wirth (ETH Zürich), Michael Franz (UCI, Irvine), Jayadev Misra (UT, Austin), C.A.R. Hoare (Microsoft Research and Oxford University) and Jim Miller (Microsoft Corporation), the latter two in common with the co-located EuroPar 2003 conference.

JMLC 2003 invited four tutorials: On *.NET* (Hanspeter Mössenböck, Wolfgang Beer, Dietrich Birngruber and Albrecht Wöß, University Linz and TechTalk); *C#* (Judith Bishop, University of Pretoria and Nigel Horspool, University of Victoria); and *Design by Contract and the Eiffel Method* and *Trusted Components and Attempts at Proofs* (Bertrand Meyer, ETH Zürich and Eiffel Software).

A memorial panel and exhibition were organized in honor of the recently deceased great computing scientists Ole-Johan Dahl, Edsger W. Dijkstra and Kristen Nygaard. The virtual part of the exhibition has been made available for everybody over the conference Web-site (<http://jmlc-itec.uni-klu.ac.at/>).

I thank for their generous support the University of Klagenfurt, the Carinthian Economic Funds (KWF), the Lakeside Science and Technology Park, the City of Klagenfurt, the Ministry of Education, Science and Culture, the Ministry of Transportation, Innovation and Technology, and the companies Microsoft Research, Quant-X and Unquare. I thank Springer-Verlag for publishing this proceedings and dpunkt.verlag for sponsoring the best paper awards. I thank the authors for their contributions and the reviewers for their excellent work which was the guarantor for the high quality of this proceedings. Last, but not least, I thank the local organization team for their enthusiastic work, especially Martina Steinbacher, Angelika Rossak, Peter Schojer, Hermann Hellwagner and Harald Kosch.

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