A Monthly Publication of the Special Interest Group on Programming Languages

Activities
Executive Committee News by Fritz Henglein 1

Conference Corner
Calendar 3
Call for Papers: LCR98 -- Fourth Workshop on Languages, Compilers, and Run-Time Systems for Scalable Computers 14

Standards
IFIP Technical Committee on Software, TC-2 by Roger K. DeBry 15

Language Tips
C++ Toolbox by Dieter Gluche, Dietmar Köhl, Karsten Weihe 22

Garbage In/Garbage Out
You Could Learn a Lot from a Quadratic by Henry G. Baker 30

Technical Correspondence
Minimal Deterministic Left-to-Right Pattern-Matching Automata 40
Nadia Nedjah
Expressing Opposition in the Object Model, First Step towards Negation 48
Nicolas Anquetil and Jean Vaucher
Unloading Java Classes That Contain Static Fields 56
C. E. McDowell and E. A. Baldwin
SPLAW: A Computable Language for Agent-oriented Programming 61
Fan Xiaocong, Xu Dianxiang, Hou Jianmin, and Zheng Guoliang
Table of Contents

Editor: A. Michael Berman, Department of Computer Science, Rowan University, Glassboro, NJ 08028 USA; berman@rowan.edu

Activities

Executive Committee News  by Fritz Henglein  

Conference Corner

Calendar  

Call for Papers: LCR98 — Fourth Workshop on Languages, Compilers, and Run-Time Systems for Scalable Computers  

Standards

IFIP Technical Committee on Software, TC-2 by Roger K. DeBry  

Language Tips

C++ Toolbox by Dieter Gluche, Dietmar Kühl, Karsten Weihe  

Garbage In/Garbage Out

You Could Learn a Lot from a Quadratic by Henry G. Baker  

Technical Correspondence

Minimal Deterministic Left-to-Right Pattern-Matching Automata  

Nadia Nedjah  

Expressing Opposition in the Object Model, First Step towards Negation  

Nicolas Anquetil and Jean Vaucher  

Unloading Java Classes That Contain Static Fields  

C. E. McDowell and E. A. Baldwin  

SPLAW: A Computable Language for Agent-oriented Programming  

Fan Xiaocong, Xu Dianxiang, Hou Jianmin, and Zheng Guoliang
**ACM SIGPLAN Notices**

*A monthly publication of ACM SIGPLAN*

**Publications Office**

ACM, 1515 Broadway, New York, New York 10036-5701 USA
1-212-869-7440 FAX +1-212-302-9618

*Editor: A. Michael Berman*

**Contributing Editors:**

Ron K. Cytron, Preston Briggs, G. Bowden Wise, Barbara G. Ryder, Seth Bergmann, Dan Yellin, Henry G. Baker, Philip Wadler, and Mary Lou Soffa

**Advertising Information:**

Michele Bianchi (212) 869-7440

ACM SIGPLAN Notices is an informal monthly publication of the Special Interest Group on Programming Languages (SIGPLAN) of ACM.

Membership in SIGPLAN is open to ACM Members or associate members for $30.00 per year and to ACM Student Members for $10.00 per year. Non-ACM members may join for $60.00 per year. All SIGPLAN members receive ACM SIGPLAN Notices, are given discounts at SIGPLAN-sponsored meetings and may vote in the Group’s biennial elections. ACM members of SIGPLAN may serve as officers of the group.

Institutional or Library subscriptions to ACM SIGPLAN Notices are available for $57 per year, and the regular back issues of the Notices may be purchased for $7 per copy from ACM Headquarters.

Requests for reprints, copies of reports, or references should be sent directly to authors.

**change of address:** acmcoa@acm.org

**Members Services Information:**

acmhelp@acm.org or +1-212-626-0500

ACM SIGPLAN Notices (ISSN 0362-1340) is published monthly by ACM, 1515 Broadway, NY, NY 10036. The basic annual subscription price is $30.00 for ACM Members. Periodicals postage paid at NY, NY 10001 and at additional mailing offices.

POSTMASTER: Send change of address to ACM SIGPLAN NOTICES, ACM, 1515 Broadway, NY, NY 10036.
SIGPLAN and the World Series

Fritz Henglein

SIGPLAN is an international organization. It sponsors conferences and workshops all over the world, and its members come from a large number of countries. That's one side of the story. The other side of it is that most of SIGPLAN's events and members are located in North America.

Through its conferences, publications and organizational work SIGPLAN is a very important pillar of the scientific and professional programming language community world-wide. At its meeting in Atlanta, Georgia, during OOPSLA in October 1997, the SIGPLAN Executive Committee discussed a number of ways to step up its international activities. Being responsible for international relations within the Executive Committee now, I have proposed for SIGPLAN to:

1. strengthen and formalize ties with other programming language organizations world-wide; specifically with EAPLS, the European Association for Programming Languages and Systems;

2. take an active, leading role in coordinating programming language conferences, workshops, etc., on a worldwide basis; e.g. to prevent unfortunate overlaps in time and space, and to foster international federation of programming language events;

3. work towards improved international mobility by taking an increased role in events outside North America, not least to make international travel for Americans and Canadians easier;

4. increase membership especially outside North America, through higher visibility and increased cooperation with other organizations.

Concrete steps discussed at that meeting include:

- Calls for papers and participation in languages such as French and German in addition to English: Such calls have a psychological effect, apart from being practically useful. They signal that a SIGPLAN conference is not an American conference possibly held on foreign soil, but an international high-quality scientific event and nothing else.

- SIGPLAN and EAPLS cooperation on conference planning: Organizers of SIGPLAN and EAPLS sponsored events should consult both SIGPLAN's and EAPLS's conference schedules during the planning stages. (See http://www.acm.org/events and http://www.cwi.nl/EAPLS). This is to avoid unfortunate overlaps between related conferences. SIGPLAN can also encourage colocation and confederation of events where it seems beneficial. (One such effort is already underway.)

- SIGPLAN Notices column on the European programming languages and systems scene: Such a column could provide an overview of the European programming language landscape, to the benefit not only of SIGPLAN members outside Europe, but also inside Europe.

- Student poster: Sending the new “Do you have a game PLAN? SIGPLAN!” student membership poster to European computer science departments should alert students to the excellent benefits SIGPLAN membership entitles them to.

- Sign-up for ACM and SIGPLAN membership: It should be possible to sign up for ACM and SIGPLAN membership at SIGPLAN-sponsored conferences, also outside North America.

(I apologize if the above list is awfully Euro-centric. It is so in the name of concreteness, but most definitely not to the exclusion of any region on Earth.)

You may ask “What for? My neighborhood SIGPLAN is just fine as it is.” National and regional professional bodies have their place, not least to represent their members vis a vis governments and the public at
large. Both scientists and professionals, however, are ultimate-
best served by a global communications infras-
structure. (That's what for.)

This may require somewhat of a mind shift, not only
by those who think or suspect the "A" in ACM stands for
"American", but also by those who think the World Se-
ries really is a world series ... Thinking global is worth
it, though: scientific, educational and professional ex-
cellence do not stop at geographic borders, and neither
should communication.

Don't you agree?

Fritz Henglein (henglein@diku.dk) is associate profes-
sor at DIKU, the Department of Computer Science at
the University of Copenhagen (http://www.diku.dk). He
is currently serving on the Executive Committee of SIG-
PLAN, the Board of the European Association for Pro-
gramming Languages and Systems (EAPLS) and the ed-
torial board of the European Research Consortium for
Informatics and Mathematics (ERCIM).
Calendar

Editor: Seth Bergmann, Dept. of Computer Science, Rowan University, Glassboro, NJ 08028; bergmann@rowan.edu

- **IUI98: 1998 International Conference on Intelligent User Interfaces**
  January 6-9, 1998; San Francisco, CA. *Sponsored by SIGCHI, SIGART, In-Coop: AAAI; British HCI Group.*
  For more information, contact Loren Terveen, AT&T Bell Laboratories, Room 2C-401, 600 Mountain Avenue, Murray Hill, NJ 07920; tel: 1-908-582-2608; email: termeen@research.att.com
  URL: http://sigart.acm.org/iui98/.

- **POPL '98: Symposium on Principles of Programming Languages**
  January 19-23, 1998; San Diego Marriott Mission Valley Hotel, San Diego, California. *Sponsored by SIGPLAN, SIGACT.*
  For more information, contact David MacQueen, AT&T Bell Laboratories, Room 2A-431, 600 Mountain Ave. Murray Hill, NJ 07974; tel: +1-908-582-7691; email: macqueen@research.att.com;

- **7th USENIX Security Symposium**
  January 26-29, 1998; San Antonio, TX. *Sponsored by USENIX; In cooperation with CERT Coordination Center.*
  For more information, contact Avi Rubin, AT&T Research Labs.

- **Computers in Engineering Symposium at ETCE**
  February 2-4, 1998; Houston, TX. *Sponsored by SIGAPP,SIGSOFT,SIGGROUP;In cooperation with SIG.*
  For more information, contact Phil Carpentier, Shell Exploration & Production, 22635 Braken Manor, Katy, TX 77001; tel: +1-281-544-3508; e-mail: 73612.2274@compuserve.com.

- **ICCIMA '98: International Conference on Computational Intelligence and Multimedia Applications**
  February 9-11, 1998; Monash University, Gippsland Campus, Churchill, Australia. *Sponsored by Monash University.*
  For more information, contact Henry Selvaraj, Gippsland School of Computing & Information Technology, Monash University, Churchill, VIC, Australia 3842; tel: +61-3-9902-6665; email: Henry.Selvaraj@fcit.monash.edu.au or iccima98@fcit.monash.edu.au;

- **IPCCC '98: IEEE International Performance, Computing, and Communications Conference**
  February 16-18, 1998; Phoenix/Tempe, AZ. *Sponsored by IEEE Communications Society. In cooperation with IEEE Computer Society.*
  For more information, contact Mohammad S. Obaidat, Monmouth University, Monmouth, NJ; email: obaidat@monmouth.edu
  URL: http://www.ece.arizona.edu/conferences/ipcc98.

- **1998 Virtual Reality Modeling Language Symposium**
  February 16-20, 1998; Doubletree Hotel, Monterey CA. *Sponsored by SIGCOMM, SIGGRAPH.*
  For more information, contact Bernie Roehl, University of Waterloo, 68 Margaret Ave., N Waterloo ON Canada N2J 3P7; tel:+1-519-888-4567 ext. 2607; email: broehl@ece.uwaterloo.ca.
• CSEE&T: 11th Conference on Software Engineering Education & Training
  February 22-25, 1998; Atlanta GA. Sponsored by IEEE Computer Society (pending); In cooperation with SEI and ACM.
  For more information, contact W. Michael McCracken, College of Computing, Georgia Institute of Technology, Atlanta, GA 30332-0280; email: mike@cc.gatech.edu.

• The Workshop on Compiler Support for System Software
  February 23 - March 3, 1998; Martinique. Sponsored by SIGPLAN.
  For more information, contact Charles Consel, University of Rennes/IRISA, Campus Universitaire de Beaulieu, 35042 Rennes Cedex, France; tel: +33-99-84-74-10; email: consel@irisa.fr.

• 29th SIGCSE: Technical Symposium on Computer Science Education
  February 26 - March 1, 1998; Atlanta Marriott Marquis, Atlanta, GA. Sponsored by SIGCSE.
  For more information, contact John Lewis, Department of Computing Science, Villanova University, 800 Lancaster Avenue, Villanova, PA 19085; tel: +1-610-519-7348; email: lewis@vill.edu
  URL: http://www.csc.vill.edu/~sigcse98.

• ACM Symposium on Applied Computing '98
  February 27 - March 1, 1998; Atlanta Marriott Marquis, Atlanta, GA. Sponsored by SIGAPP, SIGAda, SIGCUE, SIGBIO.
  For more information, contact K.M. George, Computer Science Department, Oklahoma State University, MS 219, Stillwater, OK 74078; tel: +1-405-744-5221; email: kmg@acs.okstate.edu
  URL: http://www.ucy.ac.cy/ucy/cs/SAC98.html.

• ACM 1998 Workshop on Java for High-Performance
  February 28, 1998; Network Computing, Stanford University, Palo Alto, CA. Sponsored by SIGPLAN, SIGNUM.
  For more information, contact Klaus Schauser, University of California, Computer Science Department, Santa Barbara, CA 93106; tel +1-805-893-3926; email: schauser@cs.ucsb.edu
  URL: http://www.cs.ucsb.edu/conferences/java98.

• ISSTA '98: International Symposium on Software Testing and Analysis
  March 2-4, 1998; Radisson Suite Resort, Clearwater Beach, FL. Sponsored by SIGSOFT.
  For more information, contact Mary Lou Soffa, Department of Computer Science, University of Pittsburgh, Pittsburgh, PA 15260; tel: +1-412-624-6094; email: soffa@cs.pitt.edu.

• New Network Technologies Symposium
  March 2-3, 1998; Salt Lake City, UT. Sponsored by USENIX.
  For more information, contact Phil Winterbottom, Bell Labs.

• FMSP '98: Second Workshop on Formal Methods in Software Practice
  March 4-5, 1998; Radisson Suite Resort, Clearwater Beach, FL; co-located with ISSTA. Sponsored by SIGSOFT.
  For more information, contact Mark A. Ardis, Bell Labs, Room 1G-353, 1000 E Warrenville Rd, Naperville, IL 60566-7013; tel: +1-630-979-0042; email: maa@research.bell-labs.com
  URL: http://www.bell-labs.com/~maa/fmsp98/.
• SITE '98: Society for Information Technology and Teacher Education - 9th International Conference
March 10-14, 1998; Washington DC. Sponsored by Society for Information Technology and Teacher Education (SITE) of the Association for the Advancement of Computing in Education (AACE). For more information, contact SITE 98/AACE, P.O. Box 2966, Charlottesville, VA 22902 USA; email: AACE@virginia.edu; tel: +1-804-973-3987; URL: http://www.aace.org.

• CODES '98: 6th International Workshop on Hardware/Software Codesign
March 15-18, 1998; Cavanaugh’s Inn on 5th Ave, Seattle WA. Sponsored by SIGSOFT, SIGDA, IEEE Computer Society. For more information, contact Gaetano Borriello, University of Washington, Computer Science & Engineering Dept, Box 352350, Seattle WA 98195-2350; tel: +1-206-685-9432; email: gaetano@cs.washington.edu.

• ChiliPLoP: Patterns Conference

• Practical Application Expo 1998

• The Second International Workshop on Types in Compilation
March 25-27, 1998; Kyoto University, Kyoto Japan. Sponsored by SIGPLAN, Inst. for Math. Sci. Kyoto University; In cooperation with Japan Society for Software Science & Tech. SIG Programming. For more information, contact Atsushi Ohori, Kyoto University, Research Inst. for Mathematical Sciences, Sakyo-Ku, Kyoto 606-01, Japan; tel: +81-75-753-7222; email: ohori@kurims.kyoto-u.ac.jp.

• HCW '98: Heterogeneous Computing Workshop
March 30 - April 3, 1998; Orlando FL. Sponsored by US Office of Navy Research and IEEE Technical Committee on Parallel Processing. For more information, contact John K. Antonio, Department of Computer Science, Texas Tech University, Box 43104, 8th and Boston Streets, Lubbock, TX 79409-3104 USA; tel: +1-806-742-3527; email: antonio@ttu.edu URL: http://www.cs.usu.edu/faculty/watsond/hcw.

• IPPS/SPDP '98: International Parallel Processing Symposium and IEEE Symposium of Parallel and Distributed Processing
March 30 - April 3, 1998; Delta Orlando Resort, Orlando, FL. Sponsored by SIGARCH, IEEE. For more information, contact Behrooz Shirazi, University of Texas Arlington, Department of Computer Science and Engineering, Box 19015, Arlington, TX 76019-0015; tel: +1-817-272-3605; email: shirazi@zulu.uta.edu.
Conference Corner

- **ETAPS '98: European Joint Conferences on Theory and Practice of Software**
  March 30 - April 3, 1998; Gulbenkian Foundation, Lisbon, Portugal. *Sponsored by Portugal Telecom and TAP - Air Portugal; In cooperation with the University of Lisbon, The European Association for Programming Languages and Systems, and the European Association for Theoretical Computer Science. European Symposium on Programming (ESOP) and International Conference on Compiler Construction (CC) are in cooperation with ACM SIGPLAN.*
  
  For more information, contact Jose Luiz Fiadeiro, Department of Informatics, Faculty of Sciences - University of Lisbon, Campo Grande, 1700 Lisboa, Portugal; tel: +1-351-1-7500123; email: llf@di.fc.ul.pt; URL: http://www.di.fc.ul.pt/~llf/etaps98/.

- **ESOP '98: European Symposium on Programming**
  March 30 - April 3, 1998; Gulbenkian Foundation, Lisbon, Portugal; Co-located with ETAPS '98. *Sponsored by Portugal Telecom and TAP - Air Portugal; In cooperation with ACM SIGPLAN.*
  
  For more information, contact Jose Luiz Fiadeiro, Department of Informatics, Faculty of Sciences - University of Lisbon, Campo Grande, 1700 Lisboa, Portugal; tel: +351-1-7500123; email: llf@di.fc.ul.pt; URL: http://www.di.fc.ul.pt/~llf/etaps98/.

- **CC '98: European Conference on Compiler Construction**
  March 30 - April 3, 1998; Gulbenkian Foundation, Lisbon, Portugal; Co-located with ETAPS '98. *Sponsored by Portugal Telecom and TAP - Air Portugal; In cooperation with ACM SIGPLAN.*
  
  For more information, contact Jose Luiz Fiadeiro, Department of Informatics, Faculty of Sciences - University of Lisbon, Campo Grande, 1700 Lisboa, Portugal; tel: +351-1-7500123; email: llf@di.fc.ul.pt; URL: http://www.di.fc.ul.pt/~llf/etaps98/.

- **Ninth International Conference on College Teaching and Learning**
  April 15-18, 1998; Radisson Riverwalk Hotel, Jacksonville FL. *Sponsored by Center for the Advancement of Teaching and Learning; In cooperation with IBM, PBS, Academic Systems, Simon and Schuster, AAHE, Florida Higher Ed Consutrium for Math & Science, ACM.*
  
  For more information, contact Center for the Advancement of Teaching and Learning, 501 W. State St., Jacksonville, FL 32202; tel:+1-904-632-3155; URL: http://www.fccj.cc.fl.us/~conf/.

- **Chi '98: ACM Conference on Human Factors and Computing Systems**
  April 18-24, 1998; Convention Center, Los Angeles, CA. *Sponsored by SIGCHI.*
  
  For more information, contact Clare-Marie Karat, 226 Pemberwick Road, Greenwich, CT 06831; tel: +1-914-784-7612; email: ckarat@acm.org; URL: http://www.acm.org/sigchi/chi98/.

- **ICSE '98: 20th International Conference on Software Engineering**
  April 19-25, 1998; Kyoto International Conference Hall, Kyoto, Japan. *Sponsored by SIGSOFT, IEEE CS, TCSE, IPSJ, JSSST, SCI.*
  
  For more information, contact Katsuro Inoue, Department of Information & Computer Science, Osaka University, 1-3 Machikaneyama-cho, Toyonaka, Osaka 560, Japan; tel: +81-6-850-6570,6571; email: inoue@ics.es.osaka-u.ac.jp; URL: http://icse98.aist-nara.ac.jp.

- **Computation Visual '98**
  
  For more information, contact Ana Luisa Solis, Facultad de Ciencia, Departamento de Matematicas, UNAM 04510 DF Mexico; tel: 011-622-48-58/59; email: ana@graph.fciencias.unam.mx.
• Consortium for Computing in Small Colleges, Third Annual Northeastern Conference
  April 24-25, 1998; Sacred Heart University, Fairfield, CT. Sponsored by Consortium for Computing in Small Colleges.
  For more information, contact Venu Dasigi, Computer Science Dept., Sacred Heart University, 5151 Park Ave, Fairfield, CT 06432; tel: +1-203-371-7792; email: dasigiv@sacredheart.edu
  URL: http://www.wheatonma.edu/temp/CCSCNE98.

• COOTS IV: 4th Usenix Conference on Object Oriented Technology and Systems
  April 27-30, 1998; Santa Fe, NM. Sponsored by USENIX.
  For more information, contact Cynthia Deno; email: cynthia@usenix.org;
  URL: http://www.usenix.org/events/coots98/.

• 2nd International Conference on Autonomous Agents
  May 10-13, 1998; Minneapolis, MN. Sponsored by SIGART.
  For more information, contact Katia Sycara, The Robotics Institute, Carnegie Mellon University, Pittsburgh, PA 15213; email: AGENTS98_conf@acm.org.

• 1998 IEEE International Conference on Computer Languages
  May 13-16, 1998; Loyola University, Chicago, IL. Sponsored by SIGPLAN, IEEE.
  For more information, contact David Schmidt, Department of Computer & Information Science, Kansas State University, Manhattan, KS 66506; tel: +1-913-532-6350; email: schmidt@cis.ksu.edu.

• Advanced Visual Interfaces
  May 25-27: L'Aquila Italy. Sponsored by SIGCHI, SIGMM, University of Bari. In cooperation with SIGCHI Italy.
  For more information, contact Maria Francesca Costabile, Dipartimento do Informatica, Universita' di Bari, via Orabona 4, 70126 Bari, Italy; tel: +39-80-544-3300; email: fcosta@iesi.ba.cnr.it.

• International Conference on Human-Computer Interaction in Aeronautics
  May 27-29, 1998; Montreal, Quebec, Canada. Sponsored by SIGCHI, European Institute of Cognitive Sciences & Engineering, Ecole Polytechnique de Montreal.
  For more information, contact Guy Boy, European Inst of Cognitive Science & Engineering, 4 avenue Edourd Belin, 31400 Toulouse, France; tel: +33-62-17-38-38; email: boy@onecert.fr.

• Fourth Workshop on Languages, Compilers, and Run-time Systems for Scalable Computers
  May 28-30, 1998; Carnegie Mellon University, Pittsburgh PA. Sponsored by SIGPLAN.
  For more information, contact Robert R. Kessler, University of Utah, Computer Science Dept, 3190 MEB, Salt Lake City UT 84112; tel: 1-801-581-4653; email: kessler@cs.utah.edu.

• SIGMOD/Principles of Data Base Systems
  June 1-4, 1998; Convention Services Northwest, Seattle WA. Sponsored by SIGMOD.
  For more information, contact Pamela Drew, The Boeing Company, PO Box 3707, MS 7L-70, Seattle, WA 98124; tel: +1-206-865-3610; email: pamela.a.drew@boeing.com
  URL: http://www.boeing.com/sigmod98.

• 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems
  June 1-4, 1998; Benicassim, Castellon Spain. Sponsored by SIGART.
  For more information, contact Moonis Ali, Southwest Texas State University, Department of Computer Science, 601 University Drive, San Marcos, TX 78666-4616; tel: +1-512-245-3409; email: ma04@swt.edu
  URL: http://titan.inf.uji.es/IEA98/.
Conference Corner

- **Special Interest Group on Management of Data/Principles of Data Base Systems**
  June 1-4, 1998; Seattle Center (Meeting Room), Seattle, WA. *Sponsored by SIGMOD, PODS.*
  For more information, contact Pamela Drew, The Boeing Company, P.O. Box 3707, MS 7L-70, Seattle, WA 98124; tel: +1-206-865-3610; email: pamela.drew@boeing.com
  URL: http://www.boeing.com/sigmod98.

- **International Conference on Software Reuse**
  June 2-5, 1998; Victoria Conference Center, Victoria BC Canada. *Sponsored by SIGSOFT, IEEE-CS.*
  For more information, contact Ted Biggerstaff, Microsoft, 1 Microsoft Way, 9S/1032, Redmond, WA 98052; tel: +206-936-5867; email: tedb@microsoft.com.

- **SCG '98: 14th ACM Symposium on Computational Geometry**
  June 7-10, 1998; Radisson Hotel Metrodome, Minneapolis, MN. *Sponsored by SIGACT, SIGGRAPH.*
  For more information, contact Ravi Janardan, University of Minnesota, Department of Computer Science, 4-192 EE/CS Bldg. 200 Union St. SE, Minneapolis MN 55455-0159; tel: +612-625-7338; email: janardan@cs.umn.edu.

- **Hypertext/Digital Libraries ’98**
  June 10-13, 1998; Pittsburgh Hilton, Pittsburgh, PA. *Sponsored by SIGLINK, SIGIR.*
  For more information, contact Robert Akscyn, Knowledge Systems, RD2 #213A Evans Rd, Export, PA 15632; tel: +1-412-327-8159; email: rma@centro.soar.cs.cmu.edu.

- **PASTE '98: Program Analysis for Software Tools and Engineering**
  June 14, 1998; Montreal Canada; co-located with SIGPLAN PLDI ’98. *Sponsored by SIGPLAN, SIGSOFT.*
  For more information, contact Frank Tip, IBM T.J. Watson Research Center, P.O. Box 704, Yorktown Heights NY 10598; tel: +1 (914) 784-6294; email: paste98@research.bell-labs.com;

- **SIGPLAN’98: Conference on Programming Language Design and Implementation**
  June 15-19, 1998; Sheraton Centre, Montreal, Canada. *Sponsored by SIGPLAN.*
  For more information, contact Jack W. Davidson, University of Virginia, Department of Computer Science, Charlottesville, VA 22903; tel: +1-804-982-2200; email: jwd@virginia.edu

- **USENIX 1998 Technical Conference**
  June 15-19, 1998; Marriott Hotel, New Orleans, LA. *Sponsored by USENIX.*
  For more information, contact Fred Dougis, AT&T Bell Labs.

- **35th Design Automation Conference**
  June 15-19, 1998; Moscone Center. *Sponsored by SIGDA, EDA Consortium, IEEE.*
  For more information, contact MP Associates, Jan Rabaey/Randall Bryant, 5305 Spine Rd, Suite A, Boulder CO80301; tel: +1-303-530-4333

- **ICSP5: Computer Supported Organizational Work**
  June 15-17, 1998; Naperville/Lisle Hilton, Lisle, IL. *Sponsored by SIGSOFT.*
  For more information, contact Dewayne Perry, AT&T Bell Laboratories, 600 Mountain Ave, Room 3d, Murray Hill, NJ 07974; tel: +1-908-582-2529; email: DEP@allegra.att.com.
  June 19-20, 1998; Montreal Canada (Co-located with PLDI'98). *Sponsored by SIGPLAN.*  
  For more information, contact Frank Mueller, Humboldt University Berlin, Institut fuer Informatik, Unter den Linden 6, 10099 Berlin, Germany, tel: (+49) (30) 20181-276; e-mail: mueller@informatik.hu-berlin.de  
  URL: [http://www.informatik.hu-berlin.de/ mueller/lctes98](http://www.informatik.hu-berlin.de/mueller/lctes98).

• **Hypertext '98**  
  June 20-24, 1998; Pittsburgh Hilton, Pittsburgh, PA. *Sponsored by SIGLINK,SIGIR.*  
  For more information, contact Robert Akscyn, Knowledge Systems, RD2 #213A Evans Road, Export, PA 15632; tel: +1-412-327-8159; email: rma@centro.soar.cs.cmu.edu.

• **World Conference on Educational Multimedia and Hypermedia and World Conference on Educational Telecommunications**  
  June 20-25, 1998; Freiburg, Germany. *Sponsored by University of Freiburg, State of Baden Wurttemberg, Medien und Filmgesellschaft Baden Wurttemberg, Medienforum Freiburg, City of Freiburg, ASKnet GmbH Karlsruhe, Eurographics Association.*  
  For more information, contact Ivan Tomek, Acadia Univ. (Canada) or email: aaace@CURRY.EDSCHOOL.VIRGINIA.EDU  

• **National Educational Computing Conference**  
  For more information, contact M.G. (Peggy) Kelly, CSU San Marcos, San Marcos, CA 92096; tel: +1-619-750-4315.

• **SIGMETRICS '98/Performance '98: Joint International Conference on Measurement and Modeling of Computer Systems**  
  June 22-26, 1998; Monona Terrace Convention Center, Madison, WI. *Sponsored by SIGMETRICS, IFIP 7.3.*  
  For more information, contact Mary Vernon, University of Wisconsin, Computer Sciences Department, 1210 West Dayton St, Madison, WI 53706; tel: +1-608-262-7893; email: vernon@cs.wisc.edu  

• **Digital Libraries '98**  
  June 23-26, 1998; Pittsburgh Hilton, Pittsburgh, PA. *Sponsored by SIGLINK,SIGIR.*  
  For more information, contact Robert Akscyn, Knowledge Systems, RD2 #213A Evans Road, Export, PA 15632; tel +1-412-327-8159; email: rma@centro.soar.cs.cmu.edu.

• **ACM Symposium on Principles of Distributed Computing**  
  June 28 - July 2, 1998; Puerto Vallarta, Mexico. *Sponsored by SIGOPS, SIGACT.*  
  For more information, contact Brian Coan, Bellcore, 445 South St, MCC-1C2318, Morristown NJ 07960; tel: +1-201-829-4489; email: coan@bellcore.com.

• **ICCA '98: International Conference on Computer Architecture**  
  June 29 - July 2, 1998; Hilton Barcelona, Barcelona, Spain. *Sponsored by SIGARCH, IEEE-CS/TCCA.*  
  For more information, contact Mateo Valero, Computer Architecture Department, Universitat Politècnica de Catalunya UPC, Gran Capita s/n, Modul D6, 08071 Barcelona, Spain; tel: +34-3-4016979; email: mateo@ac.upc.es.
• The Third Australasian Computer Science Education Conference
July 8-10, 1998; University of Queensland, Brisbane, Australia. Sponsored by SIGCSE.
For more information, contact David Carrington, School of Information Tech, University of Queensland, St. Lucia QLD 4072, Australia; tel: 61-7-3365-3310; email: davec@it.uq.edu.au

• ICS '98: International Conference on Supercomputing
July 13-17, 1998; Melbourne, Australia. Sponsored by SIGARCH.
For more information, contact Gregory K. Egan, Department of Electrical & Computer Systems Engineering, Monash University, Wellington Rd, Clayton, Victoria 3168, Australia; tel: +61-3-9905-1827; email: Greg.Egan@eng.monash.edu.au.

• OOPSLA ’98 Mid-Yr Workshop; ACM SIGPLAN Object Oriented Technology Workshop
July 19-21, 1998; Cherry Creek Inn, Denver, CO. Sponsored by SIGPLAN.
For more information, contact Bob Marcus, Management Systems, 4050 Legato Road, Fairfax, VA 22033; tel: +1-703-267-2107; email: bob.marcus@mail.amsinc.com
URL: http://www.amsinc.com/cj ava/oopsla2/.

• SIGGRAPH ’98: The 25th International Conference on Computer Graphics and Interactive Techniques
July 19-24, 1998; Orlando Convention Center, Orlando, FL. Sponsored by SIGGRAPH.
For more information, contact Walt Bransford, Thrillistic LLC, 3744 Lochlane, North Little Rock, AK 72116; tel: +1-501-753-8313; email: bransford@siggraph.org.

• 12th European Conference on Object-Oriented Programming
July 20-24, 1998; Vrije Universiteit Brussel, Brussel Belgium. Sponsored by SIGPLAN.
For more information, contact Luc Steels, Vrije Universiteit, Laboratory for Artificial Intelligence, Brussel, Belgium; tel: +32-2-629-33-08; email: steels@arti.vub.ac.be.

• GP ’98: Genetic Programming Conference
July 22-25, 1998; University of Wisconsin, Madison, WI. Sponsored by SIGART, Genetic Programming Conferences Inc.
For more information, contact John R. Koza, Computer Science Department, Stanford University, Box K, Los Altos, CA 94023-4011; tel: +1-415-941-0336; email: koza@cs.stanford.edu.

• SPDT ’98: Symposium on Parallel and Distributed Tools
August 3-4, 1998; Resort at the Mountain, Welches (Portland area), OR. Sponsored by SIGMETRICS.
For more information, contact Barton Miller; phone: +1-608-263-3378; email: bart@cs.wisc.edu
URL: http://www.cs.uoregon.edu/research/SPDT98/.

• ISSAC ’98: International Symposium on Symbolic and Algebraic Computation
August 13-15, 1998; Rostock University, Rostock, Germany. Sponsored by Sigsam, Gesellschaft fuer Informatik.
For more information, contact Volker Weispfenning, Universitat Passau, FMI Universitat Passau, D-94030, Passau, Germany; tel: +49-851-509-3120; email: weispfen@allice.fmi.uni-passau.de.

• The Fourth International Conference on Intelligent Tutoring Systems
August 16-19, 1998; Hyatt Regency on the Riverwalk, San Antonio, TX. Sponsored by SIGART, SIGCUE.
For more information, contact Cathy Connolly, Galaxy Scientific Corporation; tel: +1-210-979-9196; email: cathy@texas.net.
• The 7th Annual Conference on the Teaching of Computing and the Joint SIGCSE/SIGCUE Conference on Integrating Technology into Computer Science Education
August 19-21, 1998; Dublin City University, Dublin, Ireland. Sponsored by SIGCSE, SIGCUE, CTI at the University of Ulster.
For more information, contact Mats Daniels, Uppsala Universityst, Department of Computer Systems, Box 325, Uppsala, Sweden 751 05; tel: +46-18-18-31-60; email: matsd@docs.uu.se.

• International Conference on Very Large Databases
For more information, contact Alex Biliris, AT&T Labs, 180 Park Ave, Florham Park, NJ 07932; tel: +1-973-443-8777; email: biliris@research.att.com.

• XV. IFIP World Computer Congress
For more information, contact Austrian Computer Society, Wollzeile 1-3, A-1010 Vienna, Austrian; tel: +43-1-512-02-35; ifip98@ocg.or.at
URL: http://www.ocg.or.at/ifip98.html.

• The Sixth ACM International Multimedia Conference
September 13-16, 1998; Bristol, United Kingdom. Sponsored by SIGGRAPH, SIGMM, SIGMIS, SIGCOMM.
For more information, contact Wendy Hall, University of Southampton, Department of Electronics and Computer Science, Southampton S017 1BJ United Kingdom; tel: +011-44-1703-592388; email: wh@ecs.soton.ac.uk

• SIGDOC '98: 16th Annual Conference on Systems Documentation
September 24-26, 1998; Loews Le Concord Hotel, Quebec, Canada. Sponsored by SIGDOC.
For more information, contact Laurie Bennett, 41 Victor St, Ontario K2S149 Canada; tel: 613-831-0583; email: lbennett@magma.com.

• 1998 International Conference on Functional Programming
September 27-28, 1998; Mt Washington Conf Center, Baltimore, MD. Sponsored by SIGPLAN.
For more information, contact Matthias Felleisen, Rice University, PO Box 1892, Department of Computer Science, Houston, TX 77251-1892; tel: +1-713-527-4834; email: matthias@rice.edu.

• Workshop on Software and Performance
October 12-16, 1998; Santa Fe, NM. Sponsored by SIGMETRICS.
For more information, contact Connie Smith, PO Box 2640, Santa Fe, NM 87504; tel: +1-505-988-3811.

• IEEE Visualization '98
October 18-23, 1998; The Sheraton Imperial Hotel, Research Triangle Pk, NC. Sponsored by SIGGRAPH, IEEE Computer Society.
For more information, contact Theresa-Marie Rhine, Lockheed Martin, US EPA Scientific Visualization Center, 86 Alexander Dr, Research Triangle Park NC 27711; tel: +1-919-541-0207; email: theresa_marie_rhine@siggraph.org
URL: http://www.erc.msstate.edu/conferences/vis98.
Conference Corner

- **OOPSLA '98: Conference on Object Oriented Programming, Systems, Languages, and Applications**
  October 18-22, 1998; Vancouver Convention Center, Vancouver BC Canada. *Sponsored by SIGPLAN.*
  For more information, contact OOPSLA '98, 465 NE 181 St, Suite 463, Portland OR; tel: +1-503-252-5709; email: oopsla98@acm.org
  URL: http://www.acm.org/sigplan/oopsla/.

- **SIGSOFT '98: Sixth International Conference on the Foundations of Software Engineering**
  November 1-7, 1998; Royal Plaza Hotel, Orlando FL. *Sponsored by SIGSOFT.*
  For more information, contact Leon J. Osterweil, Univ. of California at Irvine, Dept. of Info. & Computer Science, Irvine CA 92717; tel: +1-714-856-7405; email: icsp2@ics.uci.edu

- **ACM Symposium on Virtual Reality Software and Technology 1998**
  November 2-5, 1998; Taipei, Taiwan. *Sponsored by SIGCHI, SIGGRAPH.*
  For more information, contact Shi-Nine Yang, National Tsing Hua University, Dept. of Computer Science, Hsinchu, Taiwan; tel: 011-886-2-5731074; email: snyang@cs.nthu.edu.tw.

- **ICCAD '98: International Conference on Computer Aided Design - 1998**
  November 8-12, 1998; Doubletree Hotel, San Jose CA. *Sponsored by SIGDA, IEEE; In cooperation with IEEE Electronic Devices Society.*
  For more information, contact Hiroto Yasuura, Kyushu University, Dept. of CS&E, Info. Science Graduate School, Kasuga Koen 6-1, Kasuga Fukuoka 816, Japan; tel: +092-583-7620; email: yasuura@c.cse.kyushu-u.ac.jp.

- **SIGAda Conference (TRI-Ada 1998)**
  November 8-12, 1998; Omni Sheraton Hotel, Washington DC. *Sponsored by SIGAda.*
  For more information, contact Bill Thomas, The MITRE Corporation, 1820 Dolley Madison Blvd, M/S W624, McLean, VA 22102; tel: +1-703-883-6159; email: bthomas@mitre.org
  URL: http://www.acm.org/sigada/tri-ada/.

- **CSCW '98: Computer Supported Cooperative Work**
  November 14-18, 1998; The Westin Hotel, Seattle WA. *Sponsored by SIGCHI, SIGGROUP.*
  For more information, contact Steve Poltrock, Computer Science Organization, Boeing Computer Services, PO Box 3707 M/S 7L-49, Seattle WA 98124; tel: +1-206-865-3270; email: steven.poltrock@boeing.com;
  URL: http://www.acm.org/sigchi/cscw98.

- **ACM/IEEE Supercomputing '98**
  November 15-20, 1998; New Orleans Convention Center, New Orleans LA. *Sponsored by SIGARCH, IEEE Computer Society TCCA.*
  For more information, contact Dennis Duke, SCRI, 400 Science Center Library, Tallahassee FL 32306; tel: +1-904-644-0175; email: dduke@scri.fsu.edu.

- **WSC '98: Winter Simulation Conference 1998**
  December 13-16, 1998; Grand Hyatt Hotel, Washington, DC. *Sponsored by SIGSIM, ASA, IEEE/SMCS, IEEE/CS, SCS, IIE, INFORMS/CS.*
  For more information, contact John Carson, Auto Simulations, 1827 Powers Ferry Road, Building 17, Suite 100, Atlanta, GA 30339; tel: +1-404-955-1501; email: johnc@autosim.com.
• POPL '99: Symposium on Principles of Programming Languages
  January 20-22, 1999; The Menger, San Antonio, TX. Sponsored by SIGPLAN,SIGACT.
  For more information, contact Andrew Appel, Princeton University, Computer Science Department, 35 Olden
  Street, Princeton, NJ 08544; tel: +1-609-258-4627; email: appel@princeton.edu.
CALL FOR PAPERS

LCR98: Fourth Workshop on Languages, Compilers, and Run-Time Systems for Scalable Computers

In cooperation with ACM SIGPLAN

Carnegie Mellon University, Pittsburgh, PA, May 28–30, 1998
(www.cs.cmu.edu/~lcr98)

Important Dates
Submissions:
5PM EST, Fri, Feb 20, 1998.
Notification:
Fri, Mar 20, 1998.
Camera Ready:

Program Committee
David Bakken (BBN)
Ian Foster (Argonne)
Thomas Gross (CMU/ETH Zurich)
Charles Koelbel (Rice)
Piyush Mehrotra (ICASE)
David O’Hallaron, Chair (CMU)
Joel Saltz (Maryland)
Jaspal Subhlok (CMU)
Boleslaw Szymanski (RPI)
Katherine Yelick (Berkeley)
Hans Zima (Vienna)

Organizing Committee
Barbara Grandillo, Chair (CMU)

For more info
David O’Hallaron
School of Computer Science
5000 Forbes Avenue
Pittsburgh, PA 15213
USA
email: droh@cs.cmu.edu
phone: (412)268-8199
web: www.cs.cmu.edu/~lcr98

The Workshop on Languages, Compilers, and Run-time Systems for Scalable Computers (LCR) is a bi-annual gathering of computer scientists who develop software systems for parallel and distributed computers. Attendance is limited to 75 participants. The LCR community is interested in a broad range of technologies, with a common goal of developing software systems that enable real applications. The organization of high end computer systems is undergoing a dramatic change away from traditional MPPs and towards shared memory systems, distributed shared memory, and (possibly heterogeneous) clusters of uniprocessors and multiprocessors. The theme for this fourth meeting is software support for these emerging systems.

Authors are invited to submit 6-page abstracts. Particular areas of interest include language features, communication code generation and optimization, communication libraries, distributed shared memory libraries, distributed object systems, resource management systems, integration of compiler and runtime systems, parallel I/O, irregular and dynamic applications, performance evaluation, and debuggers.

Paper format: 6-page (maximum) abstract. Shorter entries are welcome. Please include an email address, phone number, and fax number for the contact author. Papers can be submitted via email or postal mail; email submissions are preferred.

Electronic submission: Send one postscript file to the program chair (David O’Hallaron) at lcr98@cs.cmu.edu no later than 5:00 pm EST on Feb 20, 1998. To minimize printing problems with your submission please ensure that your postscript file can be previewed by ghostview. Contact the program chair at lcr98@cs.cmu.edu if you need any help.

Postal submission: Send three copies of the 6-page abstract to the Program Chair at the following address so that it ARRIVES by Feb 20, 1998:

David O’Hallaron
School of Computer Science
Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, PA 15213, USA

Notification: Authors will be notified via email no later than 5:00 pm EST on March 20, 1998.

Publication: An informal proceedings consisting of the 6-page abstracts will be distributed at the conference. Authors of accepted papers will submit full versions of their papers after the Workshop. The proceedings will be published in the Springer-Verlag Lecture Notes in Computer Science series. Each participant will receive a copy of the proceedings.
Report of the 1997 TC-2 Meeting

Roger K. DeBry

The TC-2 meeting was held June 5-6, 1997 in Konstanz, Germany. The TC2 Home page can be found at:

1 Opening Remarks: Chairman Kurki-Suonio

All were welcomed to Konstanz and the TC-2 meeting. Marc Scholl also welcomed everyone to Konstanz and provided information on arrangements. TC-2 thanks Marc for making the local arrangements.

2 Attendance

Country Representatives: Argentina (Haeberer) - present; Austria (Tjoa) - absent; Belgium (Meersman) - present; Bulgaria (Eskenazi) - absent; Canada (Westcott) - present; Czech Republic (Zlatuska) - absent; Denmark (Steensgaard-Madsen) - present; Finland (Kurki-Suonio) - present; France (Perrot) - absent; Germany (Paul) - present; Hungary (Klimko) - absent; India (Shyamasundar) - absent; Israel (Shoval) - absent; Japan (Kakehi) - present; Netherlands (van Katwijk) - absent with proxy to TC-2 chair; Norway (Berre) - absent; Peoples Republic of China (Jiafu Xu) - present; Portugal (Cadete) - absent; Slovakia (Molnar) - absent; So. Africa (MacGregor) - absent; Spain (Saltor) - present; Sweden (Lundberg) - absent; Switzerland (Rudin) - present; United Kingdom (Ford) - absent with apologies; United States (deBry) - present;

WG Chairs: WG2.1 (Smith) - absent with apologies; WG2.2 (Olderog) - present; WG2.3 (Jones/Shankar) - absent with apologies; WG2.4 (Bishop) - present; WG2.5 (Vouk/Wright) - absent with apologies; WG2.6 (Neuhold) - present; WG2.7 (Bass) - present; WG2.8 (Williams/Hughes) - absent with apologies; WG2.9 (Fickas) - absent;

Other attendees: Mei Hong - Observer from China

3 Miscellaneous

- Electronic Communication: The chairman noted that all communication is posted to the TC-2 web site and notes are sent via email when there is action required by TC-2 members. Prof. Olderog requested that deadlines be specified for action items. B. Wescott asked that we have a standard format for documents posted to the web. The chair asked that people email him if they have a problem with any document on the web page.
- proposed Formal Methods '99 conference. TC-2 believes that the conference is worthwhile and that IFIP should co-sponsor the conference. TC-2 working groups will not formally engage in conference plans but working group members are encouraged to participate as individuals.
- WCC'98 The chairman reported on the current status of WCC'98 in Vienna and Budapest. The part that is closest to TC-2 interests is a conference on Foundations of Computer Science, with Kurt Mehlhorn as PC chairman. TC-2 is not actively involved in its organization, and only very little information is available on it so far.

4 Working Group 2.1 (D.R. Smith, Chair)

- Home page: http://www.brookes.ac.uk/~p0071749/wg2.1/
- Activities: The 50th meeting of WG2.1 was held in February of 1996 in Le Bischenberg France in conjunction with the IFIP TC2 Working Conference on
Algorithmic Languages and Calculi. There was a total of 42 participants at the meeting including 23 WG2.1 members and 19 observers.

- The next meeting is scheduled for January 5th to 9th 1998 at Magdalen College, Oxford. Local organizers are Carroll Morgan and Oege de Moor. The following meeting is tentatively planned for Beijing in September 1998 in conjunction with the Chinese High-Tech Programme. The possibility of a State-of-the-art seminar is also being investigated.

- Working Conferences:
  IFIP TC2/WG2.1 Working Conference on Algorithmic Languages and Calculi was held in Bischenberg, Alsace, France, February 17-22, 1997. The conference set out to explore and evaluate new ideas in the techniques and mathematics of program construction. Coming from a historical focus on algorithmic languages, the general theme was one of calculational methods for deriving programs from their specifications, and the support of such methods by language tools. It was felt that submissions to the Working Conference were low: 17 out of 26 papers were accepted and published in the proceedings of the Conference. Proceedings are edited Richard S. Bird (Oxford University) and Lambert Meertens (CWI, Amsterdam), and will be published by C&H.

- It was also noted that the results of the 1992 WG2.1 State-of-the-art Seminar in Brazil are available in the following book, which was missing in the TC-2 Review Report submitted to IFIP General Assembly in Canberra:


6 Working Conferences

- The joint WG2.3/2.3 Working Conference on "Programming Concepts and Methods" (PROCOMET '98) will be held on Shelter Island, USA, 8-12 June, 1998. The organizer is Prof. Dr. Scott A. Smolka. The program committee chairs are Prof. David Gries and Prof. Dr. Willem-Paul de Roever. The budget has been approved, and a call for papers has been sent out. Papers are sought on:
  - Compositional approaches to specification and verification
  - Abstraction and refinement methods in specification and verification
  - Semantics of specification and programming concepts
  - Logical and algebraic foundations of specification and verification
  - Formalization of high-level requirement analysis
  - Design of verification tools

5 Working Group 2.2 (E.-R. Olderog, Chair)


- Activities: The working group held its last meeting 23-27 September 1996 at the International Institute for Software Technology at the United Nations University (IIST/UNU) in Macau. The host was Prof. Dines Bjorner. The meeting was attended by 12 members and 22 observers. The technical sessions comprised 21 presentations followed by extensive discussions. Topics included reactive systems, system analysis, design and verification, semantics of specifications, problems in lambda-calculus, and tools for proof development.

- Immediately after the Macau meeting the IFIP WG2.2 Beijing Seminar took place during the period 28 September - 4 October. It was organized and sponsored by the Chinese 863 HiTech Programme, Peking University, Software Institute of Academia Sinica, IFIP WG 2.2, and IIST/UNU. 14 Lecturers from the previous working group meeting presented 20 lectures to MSc and PhD students and researchers in the area of computer science from various places in China.

- The next meeting of WG2.2 will be in Graz, 22-26 September of 1997. The host is Prof. Dr. Peter Lucas. The meeting takes place immediately after the Formal Methods Europe '97 Conference, also in Graz. The WG 2.2 Chair wants to see more people involved in tools and verification at this meeting He would also like to see more people from the United States.
- Practical software engineering issues in using programming concepts and methods

• Working Group 2.3 (C. Jones/N. Shankar, Chair)
  Home page:
  http://www.cs.man.ac.uk/fmethods/ifip.html

  • Activities: The 33rd meeting of WG2.3 was held during January 22-26, 1997 at the Vintage Inn, Yountville, California. It was attended by 16 members and 5 observers. Meeting 34 will be held in Alsace, France during September 22-26 1997 following the FME’97 conference to be held in Graz, Austria. The 35th meeting is planned for Bloomington, Indiana in June of 1998.

  • Working Conferences: A joint Working Conference on Programming Concepts and Methods, PRO-COMET’98, is planned with WG2.2, to be held in Shelter Island, NY, June 8-12, 1998, with David Gries as PC co-chairman from WG 2.3.

  • Carroll Morgan is coordinating a two week lecture schedule in South Africa. Five lecturers from WG2.3 will participate. The tour will take place in mid-1998.

7 Working Group 2.4 (Judith Bishop, Chair)

• Home page: http://www.csc.uvic.ca/~wg24

• Activities: There has not been a WG2.4 meeting since the last TC-2 meeting. The current number of members in WG2.4 is 32.

• Activities: The next meeting of WG2.4 will be in Colorado in September of 1997. The local host is Vince Heuring of the University of Colorado in Boulder. Areas of principle concern include

• Activities:
  - Experience in the actual use of system implementation languages
  - The relationship of language design to the problems of system maintenance and enhancement.
  - Impacts of programming methodology on system implementation languages
  - Software and hardware environments to facilitate design, construction and maintenance of large programs
  - Software portability and reusability, and their relationship to machine independence.

• The 34th meeting of WG2.4 is planned for 1998 in Berlin, Germany, in conjunction with the planned working conference. Local host is Stephan Jaenichen.

• Working Conferences: The Working Conference System Implementation 2000: Languages, Methods, Tools, will be held at the Academy of Sciences in Berlin the last week of February, 1998. A call for papers has been sent out. Papers are sought which explore languages, methods and tools for:
  - Evolution of software systems
  - Specific application domains supporting portability and reusability of software components
  - The development of networking software architectures

  • Programme Co-Chairs will be J. Bishop, N. Horspool, and S. Jaehnichen. Further information can be found on the WG2.4 home page.

  • WG2.4 will again support the next conference on Compiler Construction, to be held March 30 - April 3, 1998 in Lisbon Portugal.

8 Working Group 2.5 (M. Vouk/Margaret Wright, Chair)

• Home Page:
  http://www.nsc.liu.se/wg25.html

• Activities:

• There has not been a WG2.5 meeting since the last TC-2 meeting. The next meeting will take place in Albuquerque New Mexico, October 16-19, 1997. The following meeting is planned for Patras, Greece, in either May or September of 1998.

• Working Conferences: WoCo 8 on Software Architectures for Scientific Computing Applications is planned for the fall of 1999 in Ottawa, Canada, with M. Gentleman and S. Rump as programme co-chairs, and M. Gentleman as local organizer.
9 Working Group 2.6 (E. Neuhold, Chair)

- Activities: The last meetings of WG2.6 were in Rockville, Maryland, November 7-9, 1996, and in Konstanz, Germany, June 2-4. Future meetings are planned as follows: Leysin, Switzerland, October 7-10, 1997 L'Aquila, Italy, May 1998 New Zealand, December 15-18, 1998

- Working Conferences: The next working conference on Database semantics, DS-7, Searching for Semantics: Data Mining, reverse engineering, etc., is scheduled for Leysin, Switzerland, October 7-10, 1997, with S. Spaccapietra as Programme Chair, and M. Andersson as local organizer.

- Plans were discussed for a working conference on Visual Database Systems VDB-4, to be held in L'Aquila, Italy, 28-30 May 1998, with S. Spaccapietra as General Chair, Y. Ioannidis and W. Klas as Programme Co-Chairs, and L. Tarantino as local organizer. The call for papers was reviewed. Papers are solicited on any topic related to visual databases. Examples include
  - Next generation interfaces
  - Visual representation
  - Three dimensional interfaces
  - Modeling of visual information
  - Image understanding
  - Visual query languages and browsers

- Plans were also discussed for DS-8, Semantics in Multimedia Database Systems, planned for December 14-18, 1998, in New Zealand, with T. Dillon as General Chair, R. Meersman, Z. Tari and S. Stevens as Programme Co-Chairs, and J. Diaz as local organizer. The call for papers was reviewed, and the budget was approved. Topics of interest for this conference include:
  - Data modelling and query languages with respect to multimedia databases
  - Semantic foundations for multimedia and hypermedia
  - Methodological aspects of multimedia database design
  - Information retrieval, knowledge discovery, and data mining

- Preliminary plans are underway for VDB-5, to be held in Banff National Park in the year 2000.

- Aims and Scope: The new aims and scope of WG2.6 were discussed. The group's interests currently include:
  - New models, languages and theories for database design and representation
  - New architectures and techniques, e.g. data warehouse, data mining, multimedia and spatio/temporal databases
  - Impact of new communications technologies such as Internet, broadband networks, wireless communication
  - Understanding, reuse and interoperation of existing data stores
  - Visual user interfaces and information visualization
  - New methodologies for building database applications

- The new aims and scope were approved to be submitted to IFIP Technical Assembly for approval. According to a decision in Bratislava they will first be reviewed by Jack Rosenfeld.

10 Working Group 2.7/13.4 (L.J. Bass, Chair)


- Activities: Past meetings include: Tel Aviv, Israel - October 20-22, 1996 7 members and 6 observers

- Atlanta Georgia - March 20-22, 1997 13 members and 4 observers
• Future meetings are planned for Siena Italy, September 13-15, 1997 and Los Angeles, California, April 14-19, 1998.

• WG2.7 has begun a three meeting series where they approach an actual design problem. They have chosen the problem of teaching an HCI course from a distance. Members of WG2.9 took them through a requirements elicitation exercise for the problem at their meeting in Atlanta. The meeting in Siena will be held jointly with WG13.2 where the interfaces for the requirements now specified for the problem will be designed. The meeting in Los Angeles will be an implementation meeting where the reference model posted to the web site will be used.

• WG2.7 has written a white paper giving a reference model for computer supported cooperative work and posted it to their home page.

• Working Conferences: The next WG2.7 Working Conference is planned for September 14-18 1998 in Crete, Greece, with R. Kazman and L. Nigay as Programme Co-Chairs.

11 Working Group 2.8 (J. Williams/J. Hughes, Chair)

• Home Page: http://www.cs.chalmers.se/WG2.8/home.html

• Activities: WG2.8 held a meeting September 22-27, 1996 in Mohonk, New York. There were 19 members and 18 observers present. The theme of the meeting was Functional Programming and the Internet. There were talks on Internet programming languages, extensions of Java, and web programming.

• The last meeting of WG2.8 was held the same week as the TC-2 meeting at the White Hart Hotel in York, England on June 2-6, 1997. Among other topics the integration of functional programming and logic programming were discussed.

• Working Conferences: WG2.8 has no working conferences planned, but actively participates in the planning of ICFP (International Conference on Functional Programming). TC-2 encourages this and would like to see even a closer connection with ICFP with ACM co-sponsorship. The next ICFP is planned for June 9-11, 1997 in Amsterdam.

• WG2.8 has also been involved informally with the First International Conference on Functional Programming Languages in Education, in Nijmegen, in December of 1995. They are now involved on the same basis with its successor, now called Declarative Programming Languages in Education, to be held in conjunction with PLILP in Southampton, September 3-5, 1997.

12 Working Group 2.9 (S. Fickas, Chair)

• Home Page: http://www.isi.edu/software-sciences/feather/wg2.9.html

• Activities: The last meeting of WG2.9 was in Haifa in May 1997. Future meetings are planned for the West Indies in January 1998, probably in conjunction with an IEEE software requirements conference.

• Schedule for Upcoming Events

- ICFP’97 97 Jul 9-11 Amsterdam NL WG2.8
- Formal Methods Europe 97 Sep 15-19 Graz A WG2.3
- WC Semantics of Database Systems DS-7 97 Oct 7-10 Leysin CH WG2.6
- SA WG2.5 Symposium 97 Oct Albuquerque USA WG2.5
- WC System Implementation 2000 98 23-26 Feb Berlin, D WG2.6
- CC’98 98 Mar 30-Apr Lisbon P WG2.4
- WC Visual Database Systems VDB-4 98 May 27-29 L’Aquila I WG2.6
- WC Programming Concepts and Methods ’98 98 Jun 8-12 Shelter Isl. USA WG2.2/2.3
- State-of-the-Art Seminar 98 July So. Africa WG2.3
- WC Engineering for Human Computer Interaction ’98 98 Sep 14-18 Crete GR WG2.7
- State-of-the-Art Seminar 98 Sep Beijing PRC WG2.1
- WC Semantics Issues in Multimedia (DS-8) 98 Dec 14-18 New Zealand WG2.6 or 99 Jan
- WC Software Architectures for Scient. Computing 99 Fall Ottawa CDN WG2.5
13 SC-22 Liaison

- R. deBry discussed email he had received in response to the posting of his TC-2 report in the SIGPLAN notices, requesting that TC-2 re-activate its liaison with SC-22. During the discussion on this item, Prof. Kakehi from Japan indicated that he had just been named Japanese representative to SC-22. TC-2 unanimously approved the proposal that he would also serve as TC-2 liaison to SC-22.

- Report from the new representative from PRC: for Scient. Computing

Prof. Jiafu Xu from the People’s Republic of China gave a short presentation on activities in China. He gave a short history of computer science in China, discussed the Computer organizations in China, Chinese contributions to the field, and experiences and lessons learned.

TC-2 is very happy to have an active representative from China. We spent some time talking about ways in which we could better involve Chinese scientists in the working groups of TC-2.

It was suggested that TC-2 contribute to WCC 2000, to be held in Beijing, by organizing a TC-2 sponsored event, either as an actual part of the Congress or as a satellite event. The TC-2 chair will pursue this possibility with Prof. Jiafu Xu as the Chinese contact.

Other suggestions from TC-2 included:

- Contact names of Chinese scientists to help with local WG arrangements
- TC-2 should get a list of sub-groups within the Chinese professional societies where there is common interest with TC-2.
- It was suggested the some of the Chinese professional societies create sub-groups which shadow TC-2 WGs, where there is a common interest.
- It was also noted that WG2.1 is planning a State-of-the-Art seminar in Beijing in conjunction with their working group meeting in September of 1998.

- Future Development of TC-2:

The chair reviewed some of the conclusions and recommendations from the TC-2 review. One of the major points was the need to maintain the close relationship of theory and practice in TC-2. WG chairs are asked to identify the people in their working groups who are from industry - in particular people involved in product development. WG chairs are asked to focus on getting people from industry involved in their working groups, even if just as observers.

We also discussed the need to get feedback from industry on the applicability of IFIP activities. It is important to note that we want advice on the goals of our research, not on the ways in which our research is done. It was suggested that TC-2 form an advisory board to provide this input. There was a lot of discussion on how to organize this. It was resolved that TC-2 should take steps to organize an advisory board by inviting leaders from industry to join our next TC-2 meeting. M. Paul and R. deBry promised to contact suitable people from industry in their respective countries.

- We went on to discuss the following questions:

  - What are the current problems with our WG’s? One of the problems is the aging membership of IFIP members. Young researchers are needed, but working within IFIP does not seem to carry the prestige that it once did. Some groups have problems in proper geographic distribution of membership. Maintaining the close relationship between theory and practice was also mentioned as a problem. It was agreed that the real value of IFIP is providing the opportunity for scientists to meet and interact with small groups of people doing research in a very specific area, and to work together on solving key problems in that area.

  - What is the role of TC-2 itself, in addition to administrative TC business? There was considerable discussion suggesting that TC-2 be itself more active in sponsoring events. A satellite event at WC 2000 would be a step in this direction. TC-2 itself should also sponsor working conferences in new areas of interest as a way of finding new vital areas for working groups.

  - It was also suggested that the TC should formulate policies for the WGs, suggest new topics for study, and sponsor joint work among WGs.

  - TC-2 needs to be more active in cooperating with other organizations. For instance, WGs could organize satellite events (tutorials, workshops, etc.) in various conferences. This im-
proves visibility and provides for the exchange of scientific information within the community. We should also seek joint meetings or meetings with a common venue.

- To increase visibility, WG chairs are asked to generate meeting reports which can be sent to other organizations, such as SIGPLAN, etc. These should also be sent to country reps who can distribute them to their country organizations.

- Should some WGs be discontinued or merged? At least from further away, WG2.1, 2.2, and 2.3 look very similar, and there is also notable overlap in membership between WG2.2 and 1.3. The groups feel, however, that their specializations are different, and merging would result in too large a group. Even if we do not think that existing WGs should be merged, we need to be able to explain the reason for having these different working groups to people outside of TC-2.

- Len Bass asked whether there is a need to discontinue or merge existing WGs to make room for new WGs. As for WG2.7/13.4, they prefer to have TC-2 as their primary parent TC.

- Can we have more WGs? The discussion led to the conclusion that there is still room for a few new working groups within TC-2, without discontinuing or merging existing ones. It was agreed that some streamlining of administrative work can be done if administrative problems grow too much.

- Where are the gaps in WGs? The following gaps were identified:
  * Software Architecture
  * Mobility
  * Programming in the Large

Of these, Software Architecture was considered to be the most promising for immediate TC-2 action. It was agreed that the Chairman pursues with Len Bass the possibility for organizing a TC-2 Working Conference on this topic, with the aim of establishing another TC-2 Working Group.

* Next Meeting

The next TC-2 meeting is scheduled for Shelter Island in conjunction with the PROCOMET'98 conference. Date would probably be June 12-13.
Information for Authors

ACM SIGPLAN Notices is an informal, unrefereed, monthly publication of the Special Interest Group on Programming Languages (SIGPLAN) of ACM. Articles appearing are to be taken as working papers and personal, rather than organizational statements. Technical contributions are printed at the discretion of the editor, based upon the following criteria:

- Is the subject matter of relevance to the SIGPLAN interest area and membership?
- Does the work say something likely to be interesting or useful to the SIGPLAN membership?
- Does the paper meet acceptable professional standards for writing (including proper English grammar and spelling) and presentation?

Contributions should be transmitted electronically if possible, preferably in Postscript with unnumbered pages. Alternatively, contributions may be sent “camera-ready” on 8½” by 11” paper, black ink on white background, printed one side, unstapled, and mailed flat. Letters to the editor may be on company letterhead. Contributions longer than one page must be single spaced. For typeset material, 10 or 11 pt font is recommended with interline spacing of no more than 2 pt. Regardless of the paper size your article is formatted for, the entire text for each page must fit within a box 7½” (19 cm) by 10” (25.4 cm); contributions that do not conform to these requirements cannot be accepted. There should be no page headings, footings, or page numbers, but submissions should be numbered in pencil on the back of each page. Legibility is key to acceptance for printed papers.

The limit is 8 pages for technical contributions; additional pages may be allowed for language definitions. Authors are encouraged to make efficient use of page space, while paying close attention to the margin and legibility requirements noted above. All technical contributions must include the following on the first page: the names of all authors and the mailing address of at least one; a list of relevant keywords for the article; and a brief (100 words maximum) abstract. Technical contributions must be accompanied by a statement that the item is for publication. Generally, ACM SIGPLAN Notices will not publish an article that has appeared elsewhere. Unless the author explicitly refuses permission, items published in ACM SIGPLAN Notices may be placed in an archive accessible through the Internet.

Letters and announcements will be assumed to be for publication unless the text or a cover letter indicates otherwise. Promotional information for conferences and workshops sponsored by or in cooperation with SIGPLAN will be inserted into SIGPLAN Notices at no charge. Announcements may be limited to a single page, depending upon page limitations. Materials promoting non-SIGPLAN conferences will be accepted for a fee; for more information please contact Michele Bianchi in ACM’s Advertising Department at (212)869-7440 or bianchi@acm.org. Commercial product announcements are not accepted, but a technical article concerning a product may contain contact information.

If a letter or article is explicitly critical of another contribution, the editor reserves the right to delay publication to give the criticized author an opportunity to reply in the same issue. Requests for reprints, copies of reports, or references should be sent directly to the authors.

Contributions conforming to the above requirements should be sent to the Editor, using one of the following modes:

via Postal Mail:
Professor Michael Berman
Department of Computer Science
Rowan University
201 Mullica Hill Road
Glassboro, NJ 08028 USA

via EMail
sig.not@acm.org
Please use ASCII, MIME-encoded attachments, or UUENCODE.

via FTP
Anonymous ftp to:
elvis.rowan.edu:sigplan/dropbox
Please follow up with email to sig.not@acm.org notifying the Editor of your submission.

39