

FORGING NEW LINKS

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Information Processing Society of Japan
Japan Society of Software Science Technology
IEEE Computer Society, Technical Committee on Software Engineering
ACM Special Interest Group on Software Engineering

In cooperation with

Ministry of Education, Science, Sports and Culture
Ministry of Posts and Telecommunications (tentative)
City of Kyoto

**The 20th International Conference on
Software Engineering**

April 19-25, 1998

**Kyoto International Conference Hall,
Kyoto, JAPAN**

[HTTP://icse98.aist-nara.ac.jp/](http://icse98.aist-nara.ac.jp/)

ICSE's twentieth birthday affords an opportunity to reflect on profound changes of the past two decades. Since ICSE's founding, politics and technology have converged to shatter once formidable barriers to international cooperation.

The collapse of the Berlin Wall symbolizes the end of the Cold War, and links in a Web page are a metaphor for our enhanced capacity for global information exchange. In this spirit, we have worked hard to ensure that ICSE98 will see an unprecedented increase in the level of international participation and provide an opportunity to highlight the interests and accomplishments of members from the Asian-Pacific region.

Yet our outreach must extend beyond geography. As we continue to build bridges to other software disciplines, researchers and practitioners in allied fields will benefit from an understanding of the contributions that software engineering can make to their work. In turn, we must address their problems in our research.

New collaborations between academia and industry will also enrich ICSE98 and our profession as a whole. The presentation of top-notch papers will, of course, constitute the core activity of ICSE98. Cutting edge research will be showcased in technical paper sessions, workshops, panels, posters, demonstrations, and special sessions devoted to the lessons learned from building large and complex software systems.

We hope you will take advantage of this unique opportunity to meet new colleagues, exchange ideas, and explore the nearly limitless possibilities that lie ahead. Join us in Kyoto for ICSE98 and share the excitement that comes from forging new links.

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ICSE 98

in



Advance Program



Technical Program

Lessons and Status Reports, Mini-Tutorial, Invited Talks, and Demonstration Sessions will be announced in the final program or WEB site <http://icse98.aist-nara.ac.jp/>

APRIL 22 (WEDNESDAY), 1998

MORNING

W1: Plenary Session

- Opening Remarks
- Keynote Presentation, Nobuaki Kumagai (Japan)

AFTERNOON

W2-1: Experiences with Software Process Improvement

- *Agile Software Process and Its Experience*, Mikio Aoyama (Nigata Institute of Tech., Japan)
- *Software Process Modeling and Enactment: An Experience Report Related to Problem Tracking in an Industrial Project*, Volker Gruhn (U. of Dortmund, Germany), Juri Urbainczyk (Open Software Associates, Germany)
- *Toward Computational Support for Software Process Improvement Activities*, Keishi Sakamoto (OMRON Corp., Japan), Kumiyo Nakakoji (Nara Institute of Science and Tech., Japan), Naoki Niihara, Yasunari Takagi (OMRON Corp., Japan)

W2-2: Formal Modeling

- *Modeling and Analysis of a Virtual Reality System with Time Petri Nets*, Rajesh Mascarenhas (Sybase Inc., USA), Dinkar Karumuri (Oracle Consulting, USA), Ugo Buy (U. of Illinois, USA), Robert Kenyon (U. of Illinois, USA)
- *Specification and Verification of an Object Request Broker*, Gregory Duval (EPFL, Switzerland)
- *Integrating Obstacles in Goal-Driven Requirements Engineering*, Axel van Lamsweerde, Emmanuel Letier (U. Catholique de Louvain, Belgium)

W2-3: Panel - Critical Issues in Software Evolution

Dewayne Perry (Bell Lab., USA), et. al.

W3-1: Reverse Engineering

- *Conceptual Module Querying for Software Reengineering*, Elisa Baniassad, Gail Murphy (U. of British Columbia, Canada)
- *Reuse-Driven Interprocedural Slicing*, Mary Jean Harrold, Ning Ci (Ohio State U., USA)
- *Extracting Concepts from File Names: A New File Clustering Criterion*, Nicolas Anquetil, Timothy Lethbridge (U. of Ottawa, Canada)

W3-2: Formal Methods and Object Orientation

- *Blending Object-Z and Timed CSP: An Introduction to TCOZ*, Brendan Mahony (Dept. of Defence, Australia), Jin Song Dong (CSIRO, Australia)
- *Three Dimensional Software Modeling*, Joseph Gil (Israel Institute of Tech., Israel), Stuart Kent (U. of Brighton, UK)
- *Formalizing Design Patterns*, Tommi Mikkonen (Tampere U. of Tech., Finland)

W3-3: Panel - Computing and Communication in the Age of

Mobility

Gruia-Catalin Roman (Washington U. in Saint Louis, USA), et. al.

Reception

APRIL 23 (THURSDAY) 1998

MORNING

T1: Plenary Session

Keynote Presentation, James Gosling (SUN, USA)

T2-1: Internet/Mobile Code/Security

- *Techniques for Trusted Software Engineering*, Premkumar Devanbu (U. of California Davis, USA), Philip Fong (Simon Fraser U., Canada), Stuart Stubblebine (AT&T Lab., USA)
- *An Approach to Large-Scale Collection of Application Usage Data over the Internet*, David Hilbert, David Redmiles (U. of California Irvine, USA)
- *Evaluating the Tradeoffs of Mobile Code Design Paradigms in Network Management Applications*, Mario Baldi, Gian Pietro Picco (Politecnico di Torino, Italy)

T2-2: Software Evolution

- *The Use of Goals to Surface Requirements for Evolving Systems*, Annie Anton (U. of South Florida, USA), Colin Potts (Georgia Institute of Tech., USA)
- *Promises: Limited Specifications for Analysis and Manipulation*, Edwin Chan, John Boyland, William Scherlis (Carnegie Mellon U., USA)
- *Architecture-Based Runtime Software Evolution*, Peyman Oreizy, Nenad Medvidovic, Richard Taylor (U. of California Irvine, USA)

T2-3: Panel - Are Methods Really Useful?

Motoshi Saeki (Tokyo Inst. of Tech, Japan), et.al.

AFTERNOON

T3-1: Testing

- *An Empirical Study of Regression Test Selection Techniques*, Todd Graves (Bell Lab., USA), Mary Jean Harrold (Ohio State U., USA), Jung-Min Kim, Adam Porter (U. of Maryland, USA), Gregg Rothermel (Oregon State U., USA)
- *What You See Is What You Test: A Methodology for Testing Form-Based Visual Programs*, Gregg Rothermel, Lixin Li, Christopher DuPuis, Margaret Burnett (Oregon State U., USA)

T3-2: Novel Approaches to Design and Validation

- *Integrating Architecture Description Languages with a Standard Design Method*, Jason Robbins, Nenad Medvidovic, David Redmiles, David Rosenblum (U. of California Irvine, USA)
- *Assisting the Automated Validation Process of User Interfaces Systems*, Bruno d'Ausbourg, Christel Seguin, Guy Durrieu, Pierre Roche (ONERA-CERT, France)

T3-3: Managing Objects

- *Consistency Management for Complex Applications*, Peri Tarr (IBM, USA), Lori Clarke (U. of Massachusetts, USA)
- *Reifying Configuration Management for Object-Oriented Software*, J-M Jezequel (Irisa/CNRS, France)

T4: Plenary Session

Most Influential Paper from ICSE-10

T5-1: Large Scale and Complex System Development

- *Parallel Changes in Large Scale Software Development: An Observational Case Study*, Dewayne Perry, Harvey Siy, Lawrence Votta (Bell Lab., USA)
- *Exploiting an Event-Based Infrastructure to Develop Complex Distributed Systems*, G. Cugola, E. Di Nitto, A. Fuggetta (Politecnico di Milano, Italy)
- *Conceptual Simplicity Meets Organizational Complexity: Case Study of a Corporate Metrics Program*, James Herbsleb, Rebecca Grinter (Bell Lab., USA)

T5-2: Computer Supported Cooperative Work

- *An Adaptable Generation Approach to Agenda Management*, Eric McCall, Lori Clarke, Leon Osterweil, (U. of Massachusetts, USA)
- *Measuring Cognitive Activities in Software Engineering*, Pierre Robillard, Patrick d'Astous (Ecole Polytechnique de Montreal, Canada), Francoise Detienne, Willemien Visser (INRIA, France)

T5-3: Panel - *Component-Based Software Engineering*

- Mikio Aoyama (Niigata Inst. of Tech., Japan), Alan Brown (Sterling Software, U.S.A.), Mary Shaw (CMU, U.S.A.), Richard Soley (OMG, U.S.A.), Sanya Uehara (Fujitsu Labs., Japan), et. al.

Conference Banquet

APRIL 24 (FRIDAY) 1998

MORNING

F1: Plenary Session

- *Keynote Presentation*: TBD

F2-1: Object-Oriented Technology

- *Design Components: Towards Software Composition at the Design Level*, Rudolf Keller, Reinhard Schauer (U. de Montreal, Canada)
- *Non-Intrusive Object Introspection in C++: Architecture and Application*, Tyng-Ruey Chuang, Y. S. Kuo, Chien-Min Wang (Academia Sinca, Taiwan)
- *Object Oriented Reuse: Experience in Developing a Framework for Speech Recognition Applications*, Savitha Srinivasan, John Vergo (IBM, USA)

F2-2: Project Estimation and Simulation

- *Evaluation of Subjective Effort Estimation Techniques*, Martin Hoest, Claes Wohlin (Lund U., Sweden)
- *Using Simulation to Build Inspection Efficiency Benchmarks for Development Projects*, Lionel Briand, Khaled El Emam, Oliver Laitenberger (Fraunhofer IESE, Germany), Thomas Fussbroich (U. of Kaiserslautern, Germany)
- *A Learning Curve Based Simulation Model for Software Development*, Noriko Hanakawa, Syuji Morisaki, Ken-ichi Matsumoto (Nara Institute of Science and Tech., Japan)

F2-3: Panel - *Formal Methods in 21st Century (Tentative)*

TBD

AFTERNOON

F3-1: Project and Workflow Management

- *The Ramp-Up Problem in Software Projects: A Case Study of How Software Immigrants Naturalize*, Susan Sim (U. of Toronto, Canada), Richard Holt (U. of Waterloo, Canada)
- *Overcoming the NAH Syndrome for Inspection Deployment*, Pankaj Jalote, S. Haragopal (Infosys Technologies Ltd., India)

- *Workflow Management Based on Process Model Repositories*, Volker Gruhn (U. of Dortmund, Germany), Monika Schneider (o.tel.o service GmbH, Germany)

F3-2: Estimation Technologies

- *A Hybrid Method for Software Cost Estimation and Risk Assessment*, Lionel Briand, Khaled El Emam, Frank Bomarius (Fraunhofer IESE, Germany)
- *Defect Content Estimations from Review Data*, Claes Wohlin, Per Runeson (Lund U., Sweden)
- *Analyzing Effects of Cost Estimation Accuracy on Quality and Productivity*, Osamu Mizuno, Tohru Kikuno (Osaka U., Japan), Katsumi Inagaki, Yasunari Takagi, Keishi Sakamoto (OMRON Corp., Japan)

F3-3: Panel - *Are New-Generation Architecture Description Language Useful?*

- John Salasin (DOD, U.S.A.), Barry W. Boehm (USC, U.S.A.), David Garlan (CMU, U.S.A.), Alex Wolf (U. of Colorado, U.S.A.) et. al.

F4: Plenary Session

- Closing Panel
- Closing Remarks

Tutorials

Monday, April 20 and Tuesday, April 21, 9:30am -- 5:00pm.

It includes the very interesting topics; Object-Orientation (Java, Design Pattern, Methods such as UML, Distributed Objects, ...) Software Process, Requirements Engineering, Maintenance, Testing, Software Architecture, Componentware, Multi-Media Application, and so on. All of them will be presented by the famous and distinguished experts of these area. The details of the contents and program will be announced soon. Please access to the ICSE'98 home page and register!!

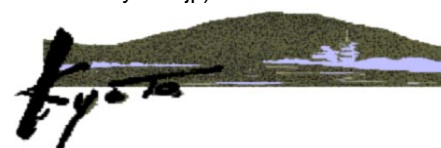
Doctoral Symposium

Tuesday, April 21 9:00am-5:00pm

The ICSE 98 Doctoral Symposium is a one day workshop prior to the regular ICSE technical conference. The goal of the doctoral symposium is to publicly discuss research goals, methods, and results at an early stage of Ph.D. research and provide useful guidance for completion of the dissertation research. The symposium will also provide an opportunity for student participants to interact with each other as well as with established researchers and engineers in the wider software engineering community.

As the systems of doctoral courses are different by cultures, we are expecting participants coming from America, Europe, Asia-Pacific and all over the world. We also plan to discuss how common or different the doctoral systems are between countries.

Contact: Tetsuo Tamai (tamai@graco.c.u-tokyo.ac.jp)





Joint Workshops

IWSSD-9 (9th Int'l Workshop on Software Specification and Design)

PC Co-chairs: A. Finkelstein (Imperial College, U. K.) and U. Buy (U. Illinois at Chicago, U. S. A.)

Date: April 16-18, 1998

Place: Ise-shima Royal Hotel (This workshop only)

Submission: Closed

Contact: M. Saeki (TIT, Japan)

E-mail: saeki@cs.titech.ac.jp

<http://salab-www.cs.titech.ac.jp/iwssd9.html>

ISORC '98 (Int'l Symposium on Object-oriented Real-time Distributed Computing)

Symposium Co-chairs: K. Kim (U.C. Irvine, U. S. A.), K. Mori (TIT, Japan) and E. Nett (GMD, Germany)

Date: April 20-22, 1998

Submission: Closed

Contact: K. Kim (U.C. Irvine, U. S. A.)

E-mail: kane@ece.uci.edu

<http://dream.eng.uci.edu/isorc/>

PDSE'98 (Int'l Symp. on Software Engineering for Parallel and Distributed systems)

PC Co-chairs: B. Kraemer (Fern Universitaet Hagen, Germany) and N. Uchihira (Toshiba, Japan)

Date: April 20-21, 1998

Submission Due: Dec. 12, 1997 (Full Paper)

Contact: N. Uchihira,

E-mail: uchi@ssel.toshiba.co.jp

<http://www.dcs.shef.ac.uk/~prc/PDSE98/> or

<http://www.ec.kyushu-u.ac.jp/~zengo/PDSE98/>

Topics: PDSE98 provides a forum for exchange of information and publication of the latest technological and theoretical advances in software engineering for parallel and distributed systems. Topics include development methodologies, software architectures, languages (eg Java), software reuse, testing and verification, performance modeling and prediction, practical experiences for parallel and distributed systems.

Int'l Workshop on the Principle of Software Evolution

Organizer: T. Katayama (JAIST, Japan), D. Perry (Bell Labs, U.S.A.), et al.

Date: April 20-21, 1998

Submission Due: Jan. 31, 1998

Contact: T. Katayama

E-mail: katayama@jaist.ac.jp

<http://kt-www.jaist.ac.jp:8000/icse98.html>

Topics: The purpose of this workshop is to discuss principles and mechanisms for software evolution. Topics discussed include, though not limited to, principles of evolution:

Int'l Workshop on Component-Based Software Engineering

PC Co-Chairs: K. Wallnau (SEI, U. S. A.), J. Ning (Andersen Consulting, U. S. A.) and S. Uehara (Fujitsu Labs., Japan)

Date: April 25-26, 1998

Submission Due: Feb. 20, 1998

Contact: K. Wallnau,

E-mail: kcw@sei.cmu.edu

http://www.sei.cmu.edu/technology/dynamic_systems/cbs/icsewshp.html

Topics: The theme of this workshop is focused on component-management infrastructures—the software technology that supports development, execution, and deployment of component-based systems.

Int'l Workshop on Aspect-Oriented Programming

PC Co-Chairs: C. V. Lopes (Xerox PARC, U. S. A.), G. Kiczales (Xerox PARC, U. S. A.), G. Murphy (U. British Columbia, Canada) and A. Lee (Korea U., Korea)

Date: April 20, 1998

Submission Due: Feb. 20, 1998

Contact: C. V. Lopes (Xerox PARC, U. S. A.)

E-mail: lopes@parc.xerox.com

<http://www.parc.xerox.com/aop/icse98/>

Topics: migrating to aspects / software design with aspects / how to identify aspects / reusing aspects / aspect description languages / the effect of aspects on software structure / programming language and environment support / translation techniques / debugging and testing with aspects

Software Engineering over the Internet

PC Co-Chairs & Contact: F. Maurer (U. Calgary, Canada)

E-mail: maurer@cpsc.ucalgary.ca

<http://searn.cpsc.ucalgary.ca/~maurer/ICSE98WS/ICSE98WS.html>

Date: April 25, 1998

Submission Due: Jan. 12, 1998

Topics: web-based software process modeling environments / distributed process enactment / replication support for software documents / distributed data repositories / world-wide configuration management support

Engineering Hypertext for Future Information Systems

PC Co-Chairs: G. Rossi (LIFIA, Argentina) and

H. Ziv (Quest Software and U.C. Irvine, U. S. A.)

Date: April 20, 1998

Submission Due: Jan. 10, 1998 (Position Paper)

Contact: H. Ziv

E-mail: zivh@quests.com

<http://www.ics.uci.edu/~kanderso/htf5/cfp.html> or

<http://www.ep.cs.nott.ac.uk/HTF>

Topics: This workshop focuses on the value added to a system by hypertext and hypermedia support capabilities as well as the actual process of embedding hypertext functions into non-hypertext information systems. The main theme for this workshop is engineering hypertext functionality, i.e., various aspects of constructing hypertext capabilities.

PSMT (Workshop on Precise Semantics for Software Modeling Techniques)

PC Co-Chairs: M. Broy (Tech. U. Munich, Germany), D. Coleman (Kings College, U. K.), T. S. E. Maibaum (Imperial College, U. K.), and B. Rumpe (Tech. U. Munich, Germany)

Date: April 20, 1998

Submission Due: Dec. 15, 1997

Contact: B. Rumpe

E-mail: rumpe@informatik.tu-muenchen.de
<http://www.forsoft.de/~rumpe/icse98-ws/>

Workshop on Human Dimensions in Successful Software Development

PC Chair & Contact: S. Murugesan (U. of Western Sydney Macarthur, Australia)
E-mail: s.murugesan@uws.edu.au
<http://btwebsh.macarthur.uws.edu.au/san/hudworkshop/>
Date: April 21, 1998
Submission Due: Dec. 15, 1997

Topics: This workshop will focus on human dimensions in software development, implementation, utilization and maintenance and have a fresh and comprehensive look at a range of human issues that impede successful software development and what could be, or should be, done solve those problems.

Workshop on Software Engineering Education

Date: April 25, 1998
Submission Due: Mar. 28, 1998
PC Chair & Contact: J. Jenkins (U. London, U.K.)
E-mail: J.O.Jenkins@city.ac.uk
Topics: The workshop focuses on the following topics but not limited.
Graduate programs in software engineering education
Discussion of syllabuses
Teaching and learning processes and assessment

MSE'98 (Int'l Workshop on Multimedia Software Engineering)

Date: April 20-21, 1998
Submission Due: Dec. 20, 1997
PC Chair & Contact: J. Tsai (General Co-Chair, U. Illinois at Chicago, U.S.A.)
E-mail: tsai@eecs.uic.edu
<http://kel.eecs.uic.edu/MSE98/>
Topics: The purpose of this workshop is to bring together active researchers in the area of software engineering and multimedia systems to exchange and evaluate the issues, experience, and trends in this area. MSE'98 will be conducted as a combination of paper presentations, invited talks, and panel discussion.

Int'l Workshop on Computing and Communication in the Presence of Mobility

Organizer C. Ghezzi (Politecnico di Milano, Italy) and C. Roman (Washington U., U.S.A.)
Date: April 25, 1998
Submission Due: February 1, 1998
Contact: C. Roman,
E-mail: roman@cs.wustl.edu
<http://www.cs.wustl.edu/~roman/ICSE-MOB/>
Topics: The immediate objective is to provide a forum for intellectual debate as well as a tutorial introduction for new comers to this field. The ultimate goal is to define an influential research agenda for the area as a whole and to generate advocacy for it by stimulating new research initiatives.

Posters and Research Demonstrations

Posters and Research Demonstrations provide an excellent opportunity to show late-breaking results and to discuss the results with the conference participants. Interactive communication and demonstration will be the most exciting and powerful presentation.

Posters

All types of work in software engineering can be presented effectively using posters during the conference. Display space will be provided in the poster and research demonstration room. A description of each poster will appear in the proceedings for posters and research demonstrations.

Research Demonstrations

Research demonstrations are intended to show early implementation of novel software engineering concepts. Research demonstrations will be scheduled into blocks of time for demonstration. In addition, a booth will be provided in the poster and research demonstration room to allow informal demonstrations throughout the conference. A description of each research demonstration will appear in the proceedings for research demonstrations. We consider any system which is at least six months away from appearing in a commercial product as a "research system". Commercial systems will not be accepted as research demonstrations.

Contact: Yoshiaki Fukazawa (fukazawa@fuka.info.waseda.ac.jp)

Asia Pacific Forum

Monday, April 20 - Tuesday, April 21 (Tentative)

ICSE98 provides an opportunity for exchanging ideas and/or information for researchers and practitioners in Asia-Pacific Region. At ICSE17 in Seattle 1994, we had a workshop on "Asian Approaches to Software Engineering". It was very successful. We are planning to have a similar event in Kyoto. And it will also be possible to implement other plans such as to have a forum to discuss emerging Asian software markets, or for special exhibits of software engineering tools made in Asia.

Contact: Kouichi Kishida (k2@sra.co.jp)

ICSE98 EXPO

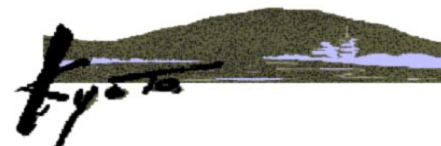
Tuesday, April 21 - Friday, April 24

The Exhibit offers commercial exhibit space to vendors as well as research exhibit space for products by academic and government research laboratories. There are two types of exhibits.

- Commercial products from vendors.
- Research products from academia, industrial research laboratories, and government laboratories.

Some exhibit space remains, and applications will be accepted on a first-come first-served basis.

Contact: Shinichi Honiden (icseexpo@po.iijnet.or.jp)





WELCOME TO KYOTO IN CHERRY BLOSSOM SEASON

CITY OF HISTORY AND LEARNING

Kyoto, a city with 1,200 years of history, is the cultural soul of Japan. Nestled among low mountains, it is blessed with both natural beauty and a rich historical legacy. It is the ideal site for international conventions. From its establishment as Japan's capital in 794 until the Meiji Restoration in 1868, Kyoto flourished as the center of government, commerce and culture in Japan. Traditional arts and an abundance of shrines and temples give the city its distinct character. With nearly 1.5 million residents, Kyoto is a vibrant mixture of old and new. Many high-tech firms have chosen it as their headquarters, and the city boasts 47 public and private colleges and universities. These significant intellectual resources combine with Kyoto's long history and tradition to provide an ideal milieu for innovation and creativity.

NATURAL BEAUTY

Kyoto is a panorama of the changing seasons: from the springtime cherry blossoms lining narrow walkways, the lush greenery of summer, to the brilliant autumn foliage of Japanese maples and the delicate layer of snow covering the surrounding mountainsides in winter. The passage of seasons is also evident in the beautiful gardens of Kyoto's ancient temples and shrines.

CULTURAL HERITAGE

Reflecting its long history as the cultural and religious center of Japan, Kyoto is home to nearly 2,000 Buddhist temples and Shinto shrines. The city's international cultural significance was recognized when 17 historical sites in Kyoto were designated as UNESCO World Cultural

Heritage Sites. Kyoto is the location of 20% of Japan's national treasures. More than 60 museums throughout the city offer visitors the opportunity to view priceless works of art and important cultural objects.

KYOTO INTERNATIONAL CONFERENCE HALL

Japan's leading convention center, the Kyoto International Conference Hall, is a complex consisting of seven separate conference halls, the largest of which can hold 2,000 persons. Another 70 conference rooms of various sizes are available for smaller meetings. Two large banquet halls and a Japanese landscape garden offer additional settings for convention participants to meet and communicate informally.

TRANSPORT

Kyoto has many modern hotels with accommodations for up to 20,000 visitors. Located near the center of Japan, it is readily accessible by land and air. The high-speed Shinkansen (bullet train) links Tokyo with Kyoto in 2 hours and 15 minutes. Overseas visitors arriving at Kansai International Airport (KIX) have a comfortable 75-minute ride by the JR Haruka Express train to Kyoto Station. There is a direct subway link from Kyoto Station to Kyoto International Conference Hall, taking about 20 minutes.

ICSE99 *The 21st International Conference on Software Engineering*

Los Angeles Airport Marriott Hotel, USA

May 16-22, 1999

Preparing for the Software Century: Software Engineering Challenges for the Global Electronic Community

Software pervades all of the growing web of computers, communications, personal and commercial services, financial and public services, and entertainment services evolving into the global electronic community of the 21st century. Providing timely, cost-effective, high-quality software for the diverse stakeholders of this community will require the best possible technology and practices the software engineering community can provide.

ICSE 99 provides a number of linked forums for presenting and discussing the most promising approaches for meeting these challenges. The forums include the main conference May 19-21, and associated special-topic workshops, symposia, and tutorials May 16-18 and May 22, 1999. The ICSE 99 main conference will include refereed technical papers, invited industry presentations, panels, exhibits, and leading keynote speakers. Featured keynote speakers will include Dr. Alan Kay, Vice President and Disney Fellow, Walt Disney Imagineering; and Dr. William Wulf, the first software engineer to serve as President of the U.S. National Academy of Engineering.

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The conference will be organized around four main subthemes:

- Quality and Service to People.
- Product Line Architecture and Componentry.
- Integrating Process and Product Engineering.
- Advanced Applications.

The deadline for submitting refereed technical papers, panel proposals, and tutorial proposals will be September 4, 1998. Besides research papers and experience reports, the Program Committee encourages well-analyzed case-studies of experiences and lessons learned in developing significant software systems. The deadline for submitting workshop proposals will be June 5, 1998. If you have questions or suggestions for additional Conference emphases, please contact the Conference organizers.

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