

23rd International Conference  
on Software Engineering

Westin Harbour Castle Hotel  
May 12–19, 2001  
Toronto, Ontario, Canada

## ICSE 2001 Window on the World

<http://www.csr.uvic.ca/icse2001/wow/>

### How Far Would You Go?



In order to attend ICSE, would you take a 16 hours bus ride, sell movie tickets, soft drinks and cosmetics, organize raffles, and become a student volunteer? Six months ago, a group of seven undergraduates decided they wanted to come to ICSE. Their college, the "Instituto Tecnológico de Tuxtla Cutiérrez" in Chiapas, the Southern tip of Mexico and where the minimum wage is less than US\$100 a month – could not afford their expenses. The founders of their local ACM Student Chapter were not deterred;

after all, single-handed they had organized a local symposium at their institution, bringing speakers from the rest of their country. After months of hard work, their efforts paid off. Being part of ICSE has enriched both their lives and

their professional perspectives. Their dream, now, is to become graduate students outside their country. In the meantime, they have started planning their fundraising for ICSE'02. For Walter Antides Caceres, Jaqueline Hernandez, Miguel Angel Jimenez, Ana Gabriela Perez, Jeanette Rosales, Lizbeth Ruiz, and Carlos Mauricio Sanchez the expression "I cannot afford it" does not exist. Where there is will, there is a way.

— Daniel German

### WOW Contest TORONTO – And the Winner Is

Mary Shaw with

Technical Ontologies Reify Object Notions – Thorough Overkill

#### Enjoy the others, too!

Two Of Reusability's Outstanding Notions: Templates, Objects (Bruce Weide)

Tutorial On Requirements Often Not Too Obvious (Anonymous)

Transactions On Really Obscure Neo-Technological Observations (Anonymous)

Task-Oriented Rule-Obsessed Neo-Traditional Ontology (Stephen MacKay)

Top-secret Ontario Report On Nerd-Tracking Organizations (Eric Dashofy)

Testing Our Requirements Objectively on Non-Trivial Operations (Steve Easterbrook)

Thousands Of Researchers ON Tour (Harald Gall)

Many thanks to all the contributors!

### In this Issue

- A Tolerance for Uncertainty, a Jug of Wine, and Thou
- Check with Your Physician Annually
- Behind the ICSE Web Site
- Note On Professionalism, Eh!
- Advanced Separation of Concerns
- SSR 2001
- SPIN 2001
- Invitation to ICSE 2002
- Plan Ahead for ICSE 2003
- FoSP
- Best Selling Books
- Thursday's Awards
- Testing: Can We Afford Not To?

### Student Volunteers

Please come to the closing at 4:45. The conference organizers promised a treat for you!

### ICSE T-Shirt Half Price Today!

### WOW Contact

wow2001@varlet.uvic.ca

### Weather Forecast

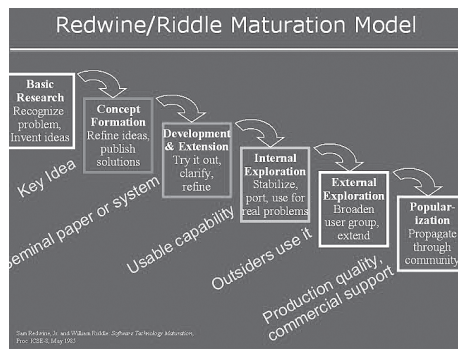
#### Today

Sunny with cloudy periods. High near 21. Probability of precipitation 10 percent.

#### Tomorrow

Sunny with cloudy periods. High near 22. Probability of precipitation 10 percent.

## A Tolerance for Uncertainty, a Jug of Wine, and Thou



WOW approached Mary Shaw after her keynote address on Thursday and asked some personal questions—  
 “What temperamental characteristics are required of a good software architecture researcher? Can someone be a good researcher and a good practitioner at the same time, or do these aspirations require two different personality types?”  
 Shaw responded, “The Redwine/Riddle

Maturation Model that I presented in my address provides a good framework for answering this question. To be a good researcher at the left end of the diagram requires a thirst for knowledge and a tolerance for uncertainty that exceed the desire for financial reward. But research and practice are not mutually exclusive—there are many types of researchers, just as there are many types of practitioners. For example, many researchers have a thirst to put the results of their work into practice. These researchers gravitate to the middle section of the diagram, where research and practice meet. Even those working in the left portion of the diagram put their ideas into practice in the form of prototypes. So in the end, there’s no need for a hard gap between research and practice.”

— John M. Linebarger

## Last Night’s Party



## Behind the ICSE Web Site

Over the past two years, Ken Wong has worked on the ICSE web site. We finally caught up with him during the conference.

**WOW:** How did you get involved?

**Wong:** Well, back in early 1999, Hausi asked me about redoing the site. The original had circus colors, frames, and all that. Basically, they wanted to make it look more “professional”, usable, and so on.

**WOW:** How did you decide on the look?

**Wong:** I’m a bit of a minimalist when it comes to design. I like clean layouts with strong alignments, and the black, white, and red look is pretty traditional. They also fit in the Canada theme.

**WOW:** What were the main challenges?

**Wong:** I think the main one for me was trying to not let the site dominate my time

too much. The site can always be better and have more content, features, etc., but there’s a limit.

**WOW:** How was the structure designed?

**Wong:** I felt it had to be reasonably logical for most people at various stages over about two years. It’s hard making the structure evolvable and extensible, yet seem fairly stable and organized. I used Adobe GoLive and Deneba Canvas on a Mac to create the site.

**WOW:** Any interesting stats to report?

**Wong:** Over 230 000 whole pages and documents have been downloaded, and over 40 editions of the site have been published. One interesting fact is that nearly 700 sites link to us. That’s amazing I think.

— Are Porter

## Check with Your Physician Annually

A rather unusual, but true, remark

at the Award Presentation session yesterday! Only 24 hours earlier it was still uncertain whether Balzer would be able to attend the award ceremony, since he was recovering from open-heart surgery performed only three weeks ago.

Robert Balzer, the recipient of the Most Influential Paper from ICSE 13 Award, delighted the audience with a witty revisit of his “Tolerating Inconsistency” paper at ICSE ’91. He discussed the influence his idea had in SE and his subsequent work.

Among other projects at Teknowledge Corporation, he is taking the idea of externalizing the model that PowerPoint has within it and applies that idea to other COTS products such as MATLAB and Rational Rose.

The reason for switching back to industry? “I am really pursuing the same research interests. Some of the technologies I have been working on are maturing and Teknowledge provides an opportunity for us to get them out into the world. My keynote at ICSE 2002 will focus on research agenda for COTS products.”

— Daniela Damian and Davor Cubranic



## Student Volunteer Party



## Note On Professionalism, Eh!

On their trip to Niagara Falls, the Paderborn Software Engineering Chapter demonstrates what makes a true professional. Even when buying some stamps at the visitor center kiosk they feel compelled to act responsibly according to good software engineering principles. A new software system has been introduced at the kiosk. After 15 minutes and 2 phone calls, the visiting Paderborn software engineers expertly recommend a reboot. They get their postcards as a consultant's fee but had to pay for the stamps, which were already billed to the computer. Finally, the Paderborners head for the lower visitors' platform. Awesome! This experience really `_is_` different than standing at the Neptun fountain on the Paderborn market place. Check it out, but beware: the process for reaching Niagara Falls using public transportation lacks reasonable documentation. Well, a guided tour is available, but the price is about \$99. The reverse engineering of the public transportation approach recovered the following workflow:

```
try {  
    SELECT a map FROM the hotel concierge  
    WHERE the bus station is marked;  
    Put yorself to the bus station;  
    // There are buses every 45 minutes.  
    // A two way ticket costs $37  
    // (your companion pays half price).  
    Take the bus to Niagara Falls CASINO  
    (directly at the falls) or to Niagara Falls  
    [City] (and pay extra for a shuttle);  
    Visit the falls;  
    Have a nice day;  
    return (to Westin Harbour Castle); }  
catch (Exception youHaveDuties) {}  
end;
```

Note that a later inspection by a mixed Paderborn and Berlin team determined that the workflow has changed further and is far from stable. Therefore, the reported results are provided without warranty.

— **Matthias Gehrke, Holger Giese, Katharina Mehner, Ulrich A. Nickel, Joerg Niere, Joerg P. Wadsack, Albert Zuendorf**

## Advanced Separation of Concerns (ASOC)

Separation of concerns is at the heart of software engineering. Recent workshops at ECOOP and OOPSLA have galvanized a vigorous community of researchers to develop new modularization and composition mechanisms for identifying, encapsulating, and manipulating artifacts that overlap, interact, and crosscut software design spaces.

The ASOC workshop at ICSE – chaired by Peri Tarr and Harold Ossher – broke new ground in this rapidly developing field. Whereas previous workshops had focussed on programming languages and code-level issues, ASOC at ICSE witnessed new approaches to separating concerns throughout and across the software lifecycle. New

directions explored the scale of concerns, access control, impact on process development, and concern lifetime. Also new to this workshop was a special session on concern analysis and verification.

The importance of these emerging contributions was underscored by challenging problems from industry. In particular, practitioners expressed an eagerness for results in this area to grapple with the multi-dimensional concerns common to software product lines. Future workshops on ASOC will occur in June at ECOOP and in October at OOPSLA. The workshop co-chairs also hope to return to ICSE again next year.

— **Scott M. Pike**



## Burn Your Muffins III

This is the final installment in the 'Staying Healthy at ICSE' series. Today, I suggest a one and a half hour walking tour of Old Cabbagetown – a historic residential neighborhood in downtown Toronto. Complete details of the walking tour are available online at <http://www.oldcabbagetown.com>, including specific details about where to go and what to see, as well as a map of the area. The starting point for the walking tour is the southeast corner of Carlton and Parliament (which is within walking distance of the Westin Harbour Castle). This is the center of Cabbagetown; from here, the tour takes you past some of the nicest houses, churches, and other buildings in the city – most dating from the 19<sup>th</sup> century. Near the end of the walk you will reach the Riverdale park and the small (but free!) Riverdale Zoo. If you've got a couple of free hours during the day or evening, this is definitely worth the trip.

— **Ross McKegney**

## Grape Expectations: Book IV

A day without wine is like a day without sunshine! So let's dispel the recent cloudiness with a glass of liquid sunshine, eh? Icewine—the wine that made Ontario famous—has been described as “the nectar of the gods.” It is made primarily from over-ripened Vidal and Riesling grapes, which are intentionally bypassed during harvest season and left to freeze on the vine in the cold Canadian winter. The fruit gradually dehydrates and shrivels up, yielding extremely sweet grapes with twice the normal sugar concentration. When harvested in the dead of winter and run through a wine press, the precious juice is left behind in the form of ice crystals, hence the name.

Icewine originated in Europe, but the geography of Ontario is particularly suitable. As long as the winter is cold and the birds fly south (so that they don't peck at the grapes left on the vine), an icewine vintage is virtually assured. As the ultimate sweet wine, icewine is at the far end of the dessert wine continuum. Such delectability does not come cheaply—icewines tend to be much more expensive than table wines. But in order of increasing price, these icewines get the nod: Ancient Coast 1997 Vidal Icewine (\$29.95), Jackson-Triggs 1997 Icewine (\$39.99), and the granddaddy of them all (the wine that put Ontario on the map by capturing the Grand Prix in Bordeaux in 1991), Inniskillen's 1999 Cabernet Franc Icewine (\$89.95). Be warned—a little goes a long way.

WOW would like to gratefully acknowledge the help of David Sherwood, the manager of the Wine-Rack at 77 Wellesley Street East, in supplying background and recommendations for this column. Drop in to say hello, and bring back a bottle or two!

— John M. Linebarger and Scott M. Pike

## WOW – Symposium on Software Reuse 2001

It is exciting times for software reuse, and the SSR 2001 program reflects this ferment. Ever wondered how the information encoded in our DNA could be organized so that similarities and differences are easy to spot? Mark Perlin, who holds Ph.D.s in mathematics, CS, and medicine, is sure to intrigue us with his keynote: “Bytes and Bases: Reusable Code.”

In a second Keynote, Dewayne Perry, University of Texas at Austin, digresses on the subject of reconfigurable architectures in “Generic Architectures: A Dynamic Case in Point”. A third, luncheon Keynote, features Ruben Prieto-Diaz, who discusses “Reuse in Engineering vs. Reuse in Software:

Why Are They Incompatible?”. SSR-01's

sessions are structured to encourage the audience to not only comment on the research presented, but also discuss the state of the art and research in the topic of the session.

The symposium is rounded out with an excellent presentation of professional development seminars, panel sessions, and of course, time to meet each other during the reception and banquet. See you there!

— Paul Bassett

## SPIN Workshop

The 8th SPIN Workshop on Model Checking reflects the growing diversity in model checking research with contributions on tool development, performance assessment and novel applications. You are bound to find something interesting in the workshop's program which you can find in your ICSE bag or online at:

<http://www.cis.ksu.edu/santos/spin2001>.

Co-located with ICSE this year, the workshop emphasizes the connections between model checking and program analysis. ICSE attendees may find the contributions describing tools for model checking Java programs, C programs and

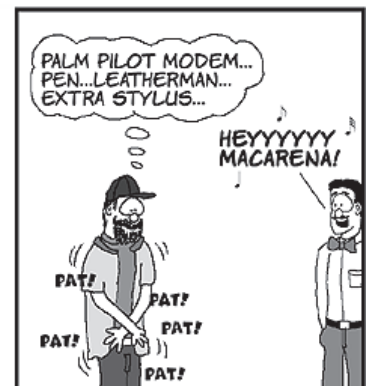
software component architectures of particular interest.

To balance the academic perspective at the workshop, representatives from Intel, Honeywell, Phillips, and Lucent, will discuss their experiences in applying model checking. Their contributions to a panel discussion of the prospects for and impediments to practical model checking promises to be lively and to expose some of the “realities” of the state of the art in model checking complex systems.

— Matthew Dyer



USER FRIENDLY by Illiad





## An Invitation to ICSE 2002



ICSE 2002 will be held 19-25 May 2002 in Buenos Aires, Argentina at the Crowne Plaza Hotel, which is located on the world widest avenue, across from the famous Obelisk. SADIO (Sociada Argentina de Informatica e Investigation Operativa), the local co-sponsor, has worked hard to assure that attendees will be pampered with special treatment from their arrival at the airport and throughout their stay. Getting to Argentina should be easy, with special travel discounts

provided by United Airlines (see our web site for more details). In addition, local tours to the outlying regions will be available. All meetings will be held in the 5-star Crowne Plaza, which features internet access in every room. Receptions will feature local cuisine and entertainment as well as some ICSE-unique surprises. One of the receptions is planned across the street from the hotel at the Opera House.

To date, extensive effort has been placed on encouraging local student and industry participation. This includes special emphasis on the poster session, as well as financially attractive registration packages (i.e., the student 6-pack, where 5 students and a professor can register for the cost of 6 students, and an industry 3 pack, with a special registration price that covers 3 conference registrations and 3 one-day tutorials). Of course, besides the tutorials and workshop, the technical program is

crucial. To meet this end, program co-chairs Michal Young and Jeff Magee have

assembled an outstanding program committee. To complement the paper, panel and industry sessions they will be creating, the keynote speakers include the former president of the International Council of Systems Engineers, Dr. Donna Rhodes of Lucent Technologies Software Products Group, Bob Balzer of Tecknowledge, and IT research consultant, Donald Feinberg of the Gartner Group.

Abstracts and papers will be accepted starting in July with cut off in mid September. For more details, please visit our web site at <http://www.icse-conferences.org/2002>.

See you in Buenos Aires!

— Will Tracz



## Plan Ahead for ICSE 2003



Start making plans for a visit to the Pacific Northwest! ICSE'03 will be in Portland Oregon, May 3-10, 2003. ICSE will be taking over the Hilton Portland Hotel, which is located right in downtown Portland, close to many excellent restaurants. The main conference will be Tuesday to Thursday, with Tutorials before the conference and several co-located workshops before and after the conference.

The Internet, globalization, e-commerce, e-government, open source, security and ultra-reliability are just some of the influences affecting software engineering. As with past ICSE's, we hope to attract

participants with a wide range of software engineering experiences and to create a forum for exchanging ideas about current and best practices, outstanding problems, and future directions. As the premier software engineering conference, ICSE is the best venue for publishing research results as well as industrial and educational experience reports.

The ICSE'03 organizing committee is in place and planning is underway. If you have suggestions for activities associated with the conference, contact the appropriate organizer. Contact information and submission dates can be found at <http://www.cs.orst.edu/icse2003/>

— Lori Clarke



## Frontiers of Software Practice

To help software professionals keep abreast of new developments in both research and practice of Software Engineering, this year's ICSE introduced the Frontiers of Software Practice series. The series features eight presentations on cutting edge software engineering in the real world, although one of the lessons that the organizers wanted to teach was apparently also the art of being in four different places simultaneously (simultaneous multi-locality?). Unfortunately, the format features four presentations going in parallel, divided in two sessions, one Wednesday and the other today (1:10-1:50PM), which can pose an interesting time-management challenge. The presentations range from collaborative software engineering to modern middleware infrastructures to voice-based access to the Web. Today's program includes talks on AntiPatterns in software architecture, Dependability of embedded systems, Infrastructure of Microsoft .NET, and Collaborative Software Engineering.

— Davor Cubranic

## Thursday's Awards

ACM SIGSOFT and IEEE CS handed out a number of other awards and recognitions. SIGSOFT's CAPS program, which supports student travel to conferences, funded 12 students for ICSE 2001 for a total of \$9,000, an increase of 50% over last year. Jeff Kramer, a SIGSOFT member, was selected as an ACM Fellow this year, and two Honorable Mention awards in this year's ACM Doctoral Dissertation contest went to students who had published much of their thesis work in ICSE: Michael D. Ernst and William Chan. ACM SIGSOFT Distinguished Service Award went to Kouichi Kishida, while ACM Outstanding Research Award went to Michael Jackson. Anke Weber and Kenny Wong were recognized for their work on running the conference newsletter WOW and the conference Web site, respectively. Lastly, IEEE Computer Society Harlan D. Mills Award went to Manny Lehman.

— Davor Cubranic

## WOW Press

### Editor-In-Chief

Anke Weber, Univ. of Victoria, Canada

### Co-Editors

Jens Jahnke, Univ. of Victoria, Canada

Michael Godfrey, Univ. of Waterloo, Canada

### Advisory and Technical Board

Kenny Wong, Univ. of Alberta, Canada

Victor Chong, Univ. of Victoria, Canada

### Reporters/Photographers

Davor Cubranic, Univ. of British Columbia, Canada

John M. Linebarger, Lehigh Univ. in Bethlehem, USA

Garry Froehlich, Univ. of Alberta, Canada

Daniela Damian, Univ. of Calgary, Canada

Nigamanth Sridhar, Ohio State Univ., USA

Scott M. Pike, Ohio State Univ., USA

Ross McKegney, Queens. Univ., Canada

### Contributors

Daniel German, University of Victoria, Canada

Matthias Gehrke, Holger Giese, Ulrich A. Nickel,

Joerg Niere, Joerg P. Wadsack, Albert Zuendorf, all Univ. Paderbon, Germany

Will Tracz, Lockheed Martin, USA

Lori Clarke, Univ. of Massachusetts, USA

Paul Bassett, Netron, USA

Matthew Dyer, Kansas State University, USA

## Best-Selling Books at ICSE

### Artech House:

1. Susan Dart, Configuration Management
2. Alexis Leon, A Guide to Configuration Management

### Cambridge University Press:

1. Allan Vermeulen et al., Elements of Java Style
2. Robin Milner, Communicating and Mobile Systems: the P Calculus

### John Wiley:

- Doug Schmidt et al., Pattern-Oriented Software Architecture, vol. 2

— Davor Cubranic

## Retraction

The article "Friday Night Fight: XP vs. CMM" that appeared in Issue 0 stated "CMM not being directly represented, although workshop W13 ... is cut from the same cloth." Workshop 13 was actually about component based software engineering, and was run by members of the SEI and others. Our apologies for this mistake.

## A Big Thank You to All the Tireless Proof Readers!

## Testing: Can We Afford Not To?

What is the price of not thoroughly testing software? John D. McGregor of Luminary Software has served as an expert witness in several trials in the United States that may help determine the answer. When software is sold for a purpose it wasn't designed or adequately tested for, clients can – and do – sue the software company. For example, software developed for a sit down restaurant must be retested before it can be sold to a fast food restaurant. Even if they are both restaurants, the volume and speed of orders is different and the software may not be able to handle it. The court looks at each case individually and applies a test of reasonableness: was the software tested using state of the art techniques, such as following the IEEE guidelines? Software is judged according to the standards available at the time the software was produced. According to McGregor, the lawsuits are largely successful. He hopes it will illustrate the importance of proper testing. As accountability becomes more and more of an issue, it may also help the move towards the certification of software professionals.

— Garry Froehlich



# We're About Speed!

**THE PRINTING HOUSE**  
**ATPH**  
www.tph.ca

