



“WOW”

ICSE's

Window On the World

Thursday, May 8
Volume 9, Issue 3



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Portland, Oregon, USA
2003 May 3-10

WOW, It's Close to time to go home!

By Hal Hart, WOW Editor (Northrop Grumman Mission Systems, the company formerly named "TRW")



The approaching end of a great conference is always bittersweet – so good you hate to see it end but oh, so tiring ...

Eugene “Spaff” Spafford of Purdue is our 3rd and final keynoter, speaking on the relationship between information security and software engineering – a relationship briefly mentioned by Bertrand Meyer on Tuesday. Now we hear the perspective of a renowned infosec leader.

Instead of enumerating the usual assortment of offerings in today's WOW, I use this space in this final issue of WOW for my own *thanks*. First, I thank ICSE 2003 General Chair Lori Clarke for once again entrusting me the tradition that WOW has become. I hope I, with the help of my great WOW staff, have succeeded in adding to your ICSE memories...

Equally importantly, I couldn't have done it without my dedicated WOW staff. Seven talented, hard-working students put up their hands and came through big time: Davor Cubranic, Reid Holmes, Annie Ying (all thanks to Gail Murphy, Univ. of British Columbia), Nigamanth Sridhar and Jason Hallstrom (both repeat WOW staffers from Ohio State), Antoinette Ahiable, and Kenia Sousa. *I predict there are 2 or 3 future WOW Editors in this group.* The eight of us are the most international staff imaginable, representing universities in Brazil, Canada, Denmark, and the USA, plus Croatia, Ghana, Hong Kong, and India by birth. It was a pleasure working with them all these past 3+ days. *Thanks to all!* -H² (Hal.Hart@ACM.ORG)

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PORTLAND CONTEST WINNER: Igor Ivkovic -- see page 5



Wed. Keynote Address

By Annie Ying (Univ. of Br. Columbia)

Wednesday's keynote presentation “Must There Be So Few? Including Women in CS” by Joanne McGrath Cohoon addressed the gender gap in Computer Science. The talk was divided into three main sections: the motivation, analysis of case studies, and suggestions of possible solutions.

While everyone in the room could see how few women there are in Computer Science, the statistics that

(continued on page 3)

Weather Forecast

Today: Crappy

High: 15 C (59 F)
Low: 6 C (43 F)

Tomorrow: Showers again

High: 16 C (61 F)
Low: 9 C (48 F)



Closing Thoughts from ICSE 2003 Chair Lori Clarke

By Nigamanth Sridhar (Ohio State)

WOW: What is your impression of ICSE 2003? Are you happy with the way it turned out?

LC: Yes, actually. The conference has been very good so far. The attendance has been very good, in spite of the way the economy is doing, and the political situation as well. The technical program and all the co-located events have been very good. On the whole, this experience has been very good, and I am very satisfied.

WOW: What was the most challenging aspect of organizing ICSE 2003?

LC: ICSE is, in general, a very difficult conference to organize, given all the different things that happen at the conferences. Apart from the 3-day
(continued on page 23)

B Sure U Have All 4 WOWs

Issues #0 (yellow), #1 (blue), and #2 (pink) are available in Registration or on handout tables. Put them with this green issue #3 for a complete set – and to prove to your employer that you really were here the whole time, not off sight-seeing ...

Mobile Widget: Agile Cooperative Learning Session (COOLE)

By Kenia Sousa (University of Fortaleza, Brazil), and Sebastian Blaustein (University of Buenos Aires, Argentina)

The session started with an outstanding drama on how Mobile Widget Inc.'s CTO Charles Option (Magnus Höglund, TietoEnator) had this great idea of creating a "Mobilodor" device, that will transmit odors through cell phones.

Wilbur "WBS" Smith (Jan Rydén, TietoEnator) was offered a double salary if he could manage a team to successfully create a prototype for a presentation in an event, 6 months from that time.

After Charles's no-option-for-a-no answer, the drama continued with a presentation on Risk management techniques (by Jyrki Kontio, Helsinki Univ. of Technology, an external consultant). Other scenarios were also enacted highlighting conflicts, with solutions being discussed later, and also a presentation on Agile Development Process (by Craig Larman, Valtech, an external consultant). It is worthwhile mentioning that the way information was transmitted was much easier to get, remember, and also have fun with it.

Dinner came afterwards, and the audience was split into 3 groups, where a problem was presented for each group as a continuation of the story, allowing participants to learn by experiencing real situations. Each group discussed their own problem during dinner, and had access to the external consultants as well as to Charles and Wilbur.

The problems focused on different aspects: managing a big change of requirements (German Customs wanted the product for heroin detection), Risk Management for improving the risk management practice, and the creation of a Plan to get the Architectural Design with a multi-sited team where partners

waited for an API to start developing value-adding applications.

Each group did a presentation after dinner, showing the alternative solutions found, and very rich discussions arose in all the topics covered.

The experience was very interactive, and presented the opportunity even for the quietest ones to participate actively. The quality of the presentations was very good, and the whole idea of the "COOLE" learning experience overcame expectations.

In a talk with Jyrki he quoted "This event shows that this kind of interactive methods can be used to create an intelligent dialog that helps people apply the theoretical things into practices. Perhaps it could be used more extensively in tutorials or workshops".

It is our hope to see this event next year, and also that nobody misses the interesting characters involved!!

The session was coordinated by David Raffo (Portland State University) and the material shown can be seen in <http://www.soberit.hut.fi/COOLE>.

ICSE Awards Ceremony

By Jason Hallstrom (Ohio State)

The annual ICSE awards ceremony was held yesterday, Wednesday, May 7, 2003. Recipients were honored for their outstanding service and research contributions to the Software Engineering community. ICSE would once again like to congratulate this year's recipients.



SIGSOFT Special Service Award: Betty H.C. Cheng, Michigan State University, USA

SIGSOFT Distinguished Service Award: Axel van Lamsweerde, University of Louvain, Belgium

SIGSOFT Outstanding Research Award: Lee J. Osterweil, University of Massachusetts, USA

IEEE Fellow Award: Dieter Rombach, University of Kaiserslautern, Germany

IEEE / CS Harlan D. Mills Award: Victor R. Basili, University of Maryland, USA



Journal of Systems and Software Recognition Award: Robert L. Glass, Computing Trends, USA

IEEE Software Process Achievement Award: Wipro Technologies, India

ICSE'15 Most Influential Paper Award: Bashar Nuseibeh, Open University, UK; Jeff Kramer, Imperial College, UK; Anthony Finkelstein, University College London, UK



A Resounding "Thank You" to the Organizers

By WOW

ICSE 2003 presented Lori Clarke and her conference organizing committee with greater-than-usual non-technical challenges – continued aftermath of the dot.com crash and 9/11, economic downturns and tightened budgets, a war, etc. WOW knows the stress and impacts on families and careers from such commitment. But surely we all agree that here we are on the last day and it was ICSE as usual!

So, if you see Lori, Walter, Laura, and any of the others with "Committee" ribbons, please thank them for their perseverance and for pulling off another great ICSE conference!

Closing Thoughts from ICSE 2003 Chair Lori Clarke

(continued from page 1)

technical program, there are so many different workshops, tutorials, and all the special events. There are also the major community meetings. So putting this together has been a great challenge. But the entire organizing committee has been extremely helpful.

I definitely could not have pulled this off without their help and assistance.

WOW: Tell us something more about these special events.

LC: We have had so many events outside of the technical program. The New Software Engineering Faculty Symposium (NSEFS) was a huge success, with the attendance being about twice that of previous edition of the symposium. The Pioneers Symposium was another very nice event with some very eminent people in the field speaking about their life experiences in software engineering. The other event is the Doctoral Symposium, which has been very useful to the students participating.

WOW: Any highlights of ICSE 2003 that you think people will go away with?

LC: The Wednesday keynote, I thought, was a very good step. Although the lack of women in the field is larger than just software engineering, it is very important for us as a community to spend some time thinking about the issue. The special events I mentioned earlier were another big highlight as well.

WOW: Any humorous/horror stories from the ICSE organization?

LC: Well, it turns out that the amount of food that we expected people to eat was way less than what is being consumed; also the amount of milk that people take in their coffee. So the estimates were all wrong. This happens to be a group of people who eat a lot. ☺

WOW: Anything you'd like to say to your successors?

LC: I wish them the best of luck in their job!

WOW: Is there anything else that you would like to say?

LC: Well, nothing else but to say that I am really looking forward to going back next week and getting back to doing some research. The work in putting this conference together has pretty much been a full-time job for the past year. Just the number of emails regarding the conference and

various issues related to it was overwhelming.

Software Engineering Tip

“Recurring industry connections (e.g., consulting, part-time, sabbaticals) throughout your career will help your academic research avoid the all-too-common syndrome of solving the problem no one needs solved, answering the question no one is asking.”

- H²

Wed. Keynote Address

(continued from page 1)

Cohon first presented quantified the gender gap. Cohoon looked at female representation in high school, undergraduate, and graduate programs, mainly in US. She pointed out that because of women's under-representation in Computer Science, women's talent in Computer Science is under-utilized and that the Computer Science discipline could benefit from broader and alternative insights from a balanced gender population.

Cohon identified some causes of the gender gap by studying over one hundred undergraduate students. She found that the deep-rooted “geeky” image attached to a stereotyped Computer Science student and the expectation that Computer Science is a “guy thing” definitely discourage many women from pursuing education in Computer Science. In addition, many female students lack self-confidence because they do not have as much exposure to computers in childhood as male students do.

Toward the end of the talk, she mentioned possible ways to improve the situation by direct encouragement from peer, family, and instructors. Additionally, same-gender student support and female role models appear to positively affect female retention in Computer Science. Other more day-to-day ways to break the male-dominated image in computer science are also helpful, such as the inclusion of female pronouns in using the language.

Throughout the talk, Cahoon gave many concrete examples to support her observations.

Although the beginning part of the talk was overdrawn because Cahoon elaborated on the problem of under-representation of woman via many statistical perspectives, these statistics can be helpful for future references. In the rest of the talk, she gave a lot of excellent succinct quotes from her case studies.

“Must There Be So Few? Including Women in CS” by McGrath Cohoon was not a usual ICSE keynote (although this is the first ICSE I have ever attended). The topic wasn't on any direction of technical research in software engineering, nor was the presenter herself in computer science. Nonetheless, this talk definitely serves the purpose, like other keynote talks, of initiating more discussion and attention on an important topic.

Software Engineering Tip

“Judgment from software developers is more important than software engineering tools and processes..”

- Mary Shaw

TWOSOME: Agile Agents Demo

By Jens-Olof Lindh

One of the demonstrations presented at the Wednesday reception was Trustworthy Sustainable Operations in Marine Environments (TWOSOME). TWOSOME is a distributed asynchronous multi-agent system, developed in a typical agile manner by the Societies of Computations laboratory (SOCLAB) at Blekinge Institute of Technology (BTH), Ronneby, Sweden. In the demonstration, we could see two different views of a mine-clearance task. One view was that three autonomous mine sweepers were cooperating and synchronizing themselves, pretending to be ship of different sizes. The other was that the mine presented its current understanding of the surroundings. If the mine was tricked to “believe” there was a ship above, it would trigger. The progress of events could be observed through 3D-visualisation tools which also enables real-time interaction with the services provided

by the agents. This can be used to set parameters at run-time, thus adjusting the behavior of the system. Also, the agents (that is, the mine-sweepers) showed that they could react to changes such as loss of some service needed to simulate a large ship. If so, they “self-healed” through changing places and activating redundant services.

The demonstrator and the development process are based on an open computational systems methodology. The development team at SOCLAB consisted of half a dozen senior software-engineering students. Apart from the development of tools for network establishment, observation and interaction (SOLACE and DISCERN), the TWOSOME application/demonstration was developed in less than eight weeks. The goals of the project were initially defined by Kockums AB as a scenario including a prioritized list of specific behaviors. The progress of the development was assessed on a weekly basis. Both parties would alert the other when necessary. Typically, clarifications and definitions were discussed, adding precision within the defined scope.

Twosome is now used as a basis for improving the understanding the challenges and opportunities of addressing network-based operations with architectures for open systems. Kockums (which by the way also is cooperating with NorthropGrumman Ship Systems) is very satisfied with the results produced by this very rapid development. The cooperation with SOCLAB will continue. Find more info at <http://www.soclab.bth.se>.

A reCAP on the CAPS Program

By B. Cheng

This year the ACM SIGSOFT CAPS (Conference Attendance Program for Students) received a record number of applications, close to 50 (more than double from previous applications for ICSE). Approximately 50% of the applicants were from students studying in the US and 50% from outside the US.

Applicants were evaluated based on their curriculum vitae, letters of support, and their level of participation at ICSE technical program, ICSE workshops, and/or co-located events. In addition, because CAPS has a limited budget, it is important for a student's home institution to provide some matching funds from either the University or a research grant. CAPS funding is limited to covering the costs of conference or workshop registration fees, travel costs, and lodging expenses.

This year the CAPS program received additional funding from two additional sources to travel to ICSE03: the National Science Foundation (NSF) and IEEE. A selected group of CAPS applicants received funding from NSF to attend ICSE as well as the Pioneer's Symposium (May 4), which provided the students with an opportunity to listen and interact with leading pioneers in software engineering.

In the end, 28 students received funding to attend ICSE and related events. All CAPS award winners had one or more papers in a workshop or the main conference. Below is the list of students who were given CAPS awards with funding from ACM SIGSOFT, IEEE, and xNSF.

- Antoinette Ahiable, Aalborg University, DENMARK
- Polly Allen, University of Victoria, CANADA
- Hitesh Bhambhani, UT-Arlington, USA
- Sebastian Blaustein, Universidad de Buenos Aires, ARGENTINA
- Andrea Capiluppi, Politecnico di Torino, ITALY
- Marco Castaldi University of L'Aquila, ITALY
- Davor Cubranic, Univ. British Columbia, CANADA
- Antiniscia Di Marco, Universita' dell'Aquila, ITALY
- Ada Diaconescu, Dublin City University, IRELAND
- Yinghua Jia, Univ. of Waterloo, CANADA
- James Law, Oregon State University, USA
- Lucas Layman, North Carolina State Univ., USA
- Andrian Marcus, Kent State Univ., USA
- Marija Mikic-Rakic, University of Southern California, USA

- Oscar Mondragon, University of Texas-El Paso, USA
- Josef Nedstam, Lund University, SWEDEN
- Johann Oberleitner, TU Vienna, AUSTRIA
- Martin Pinzger, TU Vienna, VIENNA
- Andrea Polini, Scuola di studi universitari e perfezionamento "sant'Anna", ITALY
- Roshanak Roshandel, Univ Southern California, USA
- Susanne Sherba, Colorado, USA
- Kenia Sousa, Univ of Fortaleza, BRAZIL
- Nigamanth Sridhar, Ohio State University, USA
- Massimo Tivoli, Universita' dell'Aquila, ITALY
- Michael Voightmann, MIT, USA
- Eric Wohlstadter, UC Davis, USA
- Xiangyu Zhang, Univ. of Arizona, USA
- Wei Zhao, University of Alabama at Birmingham, USA

Final note from B. Cheng:

It has been a great pleasure to serve as the Director of the CAPS program for the past 7 years. In particular, it has been exciting to witness and contribute to the dramatic increase in student participation at ACM SIGSOFT conferences and workshops. The CAPS awardees and their advisors should all be proud of the wonderful accomplishments of this talented group of students. I greatly appreciate the support from the current SIGSOFT president, Alex Wolf, and the past president, David Notkin who have been extremely supportive in providing funds for the CAPS programs, especially when I overspent the budget (often having to ask for more funds to support more deserving students). I hope that other organizations (industrial and otherwise) may follow the lead of NSF and IEEE in providing supplemental funding to the CAPS program to further support conference travel for students. In closing, I am happy to say that I leave a balance greater than 0 for Dr. Barbara Staudt Lerner to use for CAPS awards for the remaining conferences of 2003.

Find more information about CAPS at: <http://www.cse.msu.edu/CAPS>

Writing Workshop – ***Mary Shaw***

By Reid Holmes (Univ. of British Columbia)

Mary done give a good presentation on how and how not to right good research papers. Her presentation was motivated by examples she encountered while sitting in on the

program committee meetings for the 2002 ICSE, as well as by the papers submitted to this year's conference. Papers were characterized by their type and evaluation measures; Mary went through both kinds of characterizations and offered her opinions on their effectiveness, both research-wise, and writing-wise.

Mary's first point, and perhaps the most important to keep in context throughout the rest of this article, was that in order to produce a good paper, one must first have completed some worthy research. It is impossible to turn a dubious result into a good paper while retaining your academic integrity as the author. After some suitable research has been performed, Shaw states that, "Writing a paper is much like designing a system."

Strong papers embody strong research. While writing a paper, your goal as a researcher is to convey your findings to the community at large. In order to do this you need to clearly identify your contribution to the field. It is important to identify exactly what points your research contributes, while comparing and contrasting extensively to related literature. Failing to spend the appropriate effort on related work can make it difficult for a Program Committee to determine exactly what the contribution of your research is. Furthermore, your findings and methods must be defined clearly enough that other researchers can figure out how to replicate, and build upon your work.

Appropriate evaluation of research is necessary in order to convince the program committee of the effectiveness of the work being presented in the paper. Selecting the correct type of evaluation was beyond the scope of Mary's talk, although she emphasized the importance of performing suitable analysis of the project, and the importance of fully explaining the evaluative measures so the program committee can determine their completeness and appropriateness for the problem.

Mary has compiled a list of her writing tips and techniques (and those of others in the research community)

ICSE 2003
Window On the World (WOW)
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Nigamanth Sridhar (Ohio State)
Jason Hallstrom (Ohio State)
Antoinette Ahiable (Aalborg University)
Annie Ying (Univ. of Br. Columbia)
Kenia Sousa (Univ. of Fortaleza, Brazil)

Contributors
"Bert the Roving Software Engineer,"
Barrie Thompson & Helen Edwards
Dr. Sood
Mary Shaw
Jens-Olof Lindh
Betty Cheng

on her website at <http://spoke.compose.cs.cmu.edu/write/>, in addition to the paper in this year's proceedings entitled, "Writing Good Software Engineering Papers."

PORTLAND Acronym Quiz Winners

By vote of a subset of the WOW staff, winner of the PORTLAND Acronym contest is **Igor Ivkovic** with his entry:

Producing Outstanding Research Through Little Advances and New Discoveries (PORTLAND)

First runners-up were **Jo Atlee & Betty Chung** with:

Parallel Opportunities to Read, Talk, Learn, and Argue about New Directions (PORTLAND)

Special note is made of the fact that WOW staffer RH would have won if HH hadn't declared him ineligible, with:

Polymorphic Online Regression Testing Language Abstract Native Debugger (PORTLAND)

The judges' decisions are final.



ICSE Attendance Survey Results

Based on a very small sample, attendees have attended a mean of 2.0 ICSEs. Jef Bell is the longest ICSE attendance "gapper," having last attended ICSE-18 in Berlin 7 years ago. (*Zero credit for Dick Taylor who thought this was still a who-attended-the-most content, but would have won with 22 since we thought Marv didn't submit his 24.*)

<u>PLAYOFF SCORES</u>			
<u>NHL 2nd Round</u>			
Vancouver	1		⊖
Minnesota	5		
<u>NBA 2nd Round:</u>			
Boston Celtics	95		
New Jersey Nets	104		
Los Angeles Lakers	95		⊖
San Antonio Spurs	114		

HEADLINES AROUND THE WORLD

TECH: "Microsoft unveils iLoo, an internet-connected outhouse."

DIPLOMACY: "Cretien watches hockey instead of Liberal leadership debate."

WAR: "Germans unhappy that Polish will command their troops in Iraq."

SPORTS & HOLLYWOOD: "Lakers *disband* after losing two games to Spurs -- sports world & Jack shell shocked. *Really!*"

<u>Stock Markets</u>	
<u>7 May 2003:</u>	
DJIA	8,560 (-28)
NASDAQ	1,507 (-17)
S&P	930 (unchanged)
TRW	<i>Does not exist</i>
Northrop Grumman	90.10 (+.07)
<u>AT ICSE 2002:</u>	
DJIA	10,216 (+58)
NASDAQ	1,698 (+24)
S&P	1,097 (+11)
TRW	55.25 (+0.40)
Northrop Grumman	122.76 (-1.72)

Software Engineering Tip

No new method will become state-of-the-practice unless supported by a tool(s) for automate-able steps, metrics, etc., and no tool will catch on unless it clearly enables the user to do his job *easier*.
-WOW

Recognizing ICSE 2003's Student Volunteers

Agrawal, Aditya	Vanderbilt	Law, James	OR ST
Ahiable, Antoinette	Aalborg	Layman, Lucas	NC State
Allen, Debra	PSU	Liu, Wendy	University of Toronto
Andric, Milan	PSU	Martin, Johannes	Uni Mainz, Germany
Bahsoon, Rami	University College, London	Meiners, Chad	MSU
Bhambhani, Hitesh	U of Tx at Austin	Misra, Upmanyu	Kanpur Univ
Blaustein, Sebastian	U Buenas Aires	Nagabhushan, Gayathri	PSU
Cheng, Shang-Wen	CMU	Nagappan, Nachiappan	NC State
Chisan, James	U of Victoria	Nagboth, Sairajkiran	OSU
Dalliagnol, Michela	Bolzano	Narendra, Vivek	OSU
De Simoni, Luis	Univ of Buenos Ares	Nayak, Umanath	PSU
Deng, Min	MSU	Negi, Ansuya	PSU
Devereux, Benet	U Toronto	O'Brien, Daniel	Univ of Minnesota
Devaraj, George	U of Minn	Oza, Nilay	Hertsforshire
Fisher	OSU	Roshandel, Roshanak	USC
Greco de Paula, Maria	PUC-Rio, Brazil	Saff, David	MIT
Hallstrom, Jason	Ohio State	Setamanit, Siri-on	PSU
Harihar, Karthik	PSU	Sethanandha, Bhuricha	CMU
He, Qingfeng	NCSU	Simons, Kevin	Tufts
Hennessy, Mark	Nat. Uni. Ireland	Sousa, Kenia	UNIFOR
Huynh, Duy	Univ of Maryland	Spehar, Greg	PSU
Janes, Andrea	Bolzano	Sridhar, Nigamanth	Ohio State
Jia, Yinghua (Silvia)	Waterloo	Stojanovic, Ana	Bolzano
Kirk, John	PSU	Subramaniam, Mahesh	OSU
Konrad, Sascha	MSU	Telfer, Amber	OGI
Koru, Akif Gunes	So Meth Univ	Van Emden, Eva	U of Victoria
Kulkarni, Kavita	PSU	Wallace, Matt	MSU
Law, James	OR ST	Xu, Lanyue	OSU



ICSE 2005
St. Louis, Missouri, USA
15 - 21 May, 2005

<http://www.cs.wustl.edu/icse05/>

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FINAL ICSE 2002 PHOTO MEMORIES

The ICSE 2003 WOW Crew



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Annie Ying



Hal Hart





26th international conference on software engineering

May 23-28, Edinburgh International Conference Centre, Scotland, UK

ICSE 2004 will offer an exciting program of events, including keynote talks by leaders in the field, tutorials, workshops and presentations of technical papers on innovative research and the cutting edge of practice. The main program will be complemented by an array of social events, providing further opportunities for informal networking. Find out how you can get involved!

In 2004, the ancient Scottish city of Edinburgh will host the ICSE conference. With the conference hotels and venue all within easy reach of the Castle, Royal Mile and medieval old town, ICSE 2004 promises to be to be a highly enjoyable as well as stimulating conference.

The conference chair Anthony Finkelstein promises that ICSE 2004 will be both fun, and informative. The committee will put together a conference that will balance high-quality technical content as well as exciting events that will take advantage of ICSE 2004's location in Scotland. There will be a whiskey tasting event, and a tour of the National Museum of Scotland as part of the social calendar. Anthony also encourages the community to start thinking about ideas for co-located events with ICSE 2004, and getting in touch with him.

General Chair

Anthony Finkelstein, University College, London

Program Chairs

Jacky Estublier, Universite Grenoble

David Rosenblum, PreCache Inc.

Keynote Speakers

Richard Stallman
Founder GNU Project

Janet Thornton
Director, EBI

Karl Lieberherr
Software Engineer

Important Dates

Technical Papers

September 22, 2003

Proposals for tutorials and workshops

October 27, 2003

<http://conferences.iee.org.uk/ICSE2004/>

See you next year in Scotland!

