Since it was established in 1979, SAFECOMP has contributed to the progress of the state-of-the-art in dependable applications of computer systems.

SAFECOMP is an annual event covering the state-of-the-art, experience and new trends in the areas of computer safety, reliability and security regarding dependable applications of computer systems. SAFECOMP provides ample opportunity to exchange insights and experience on emerging methods and practical applications across the borders of different disciplines.

SCOPE OF THE CONFERENCE

SAFECOMP focuses on safety-critical computer applications and is a platform for knowledge and technology transfer between academia, industry and research institutions.

The cross-fertilization between different scientific communities and industry supports the achievement of long-term results contributing to the integration of multidisciplinary experiences in order to improve the design and deployment of dependable computer-based systems. Over the years the industry participation in SAFECOMP has grown steadily. This emphasizes the importance of technology transfer between academia and industry. SAFECOMP 2003 further sustains the healthy interchange of research results and practical experiences.

The SAFECOMP 2003 programme consists of 30 papers selected from 96 submissions from all over the world. SAFECOMP 2003 acknowledges the invited Keynote Talks enhancing the technical and scientific merit of the conference.

We would like to thank the International Programme Committee, the External Reviewers, the Keynote Speakers and the Authors for their work in support of SAFECOMP 2003. We would also like to thank the Conference Staff at the National e-Science Centre for their valuable collaboration in organizing and hosting SAFECOMP 2003.

We really enjoyed the entire work and we hope you appreciate the care that we have put in order to deliver an enjoyable and fruitful event. Finally, we would like to invite you to attend SAFECOMP 2003.
PROGRAMME AT A GLANCE

**TUESDAY, 23 SEPTEMBER**

09:00-18:00 SAFECOMP 2003 TUTORIALS

**TUTORIAL 1**
Critical Systems Development with UML and Model-based Testing
Jan Jürjens (Munich University of Technology, DE)

**TUTORIAL 2**
The CORAS Methodology for Model-based Risk Assessment
Bjørn Axel Gran (Institutt for energiteknikk, OECD Halden Reactor Project, NO)

**TUTORIAL 3**
Self-Stabilization - Fault Tolerance in Distributed Systems
Pradip K. Srimani (Clemson University, South Carolina, US)

You will find further information about the tutorials in the SAFECOMP 2003 website.

18:30...
SAFECOMP 2003 WELCOME RECEPTION AT THE NATIONAL E-SCIENCE CENTRE

**WEDNESDAY, 24 SEPTEMBER**

09:00-09:30 SAFECOMP 2003 OPENING
SAFECOMP 2003 Welcome & Opening
Bev Littlewood (City University, GB)

**EWICS TC7 Welcome**
Udo Voges (Forschungszentrum Karlsruhe, DE)

SAFECOMP 2003 Presentation of the Technical Programme
Stuart Anderson, Massimo Felici (University of Edinburgh, GB)

09:30-10:30 KEYNOTETALK
Issues in Safety Assurance
Martyn Thomas (University of Oxford, GB)

10:30-11:00 COFFEE BREAK

11:00-13:00 SESSION 1: FORMAL METHODS
Chair: Maritta Heisel (University of Magdeburg, DE)

Elicitation and Validation of Graphical Dependability Models
David Wright (City University, GB)

Visual Modeling and Verification of Distributed Reactive Systems
A. Iqbal, A. K. Bhattacharjee, S. D. Dhodapkar (Bhabha Atomic Research Centre, IN), and S. Ramesh (Indian Institute of Technology, IN)

Automatic Timeliness Verification of a Public Mobile Network
Ester Ciancamerla, Michele Minichino (ENEA CR Casaccia, IT), Stefano Serro (TECSIT Telecontrollo e Sistemi, IT), and Enrico Tronci (Università di Roma “La Sapienza”, IT)

Improving System Reliability via Model Checking: the FSAP/NuSMV-SA Safety Analysis Platform
Marco Bozzano and Adolfo Vellafederri (ITC-IRST, IT)

13:00-14:00 LUNCH

14:00-16:00 SESSION 2: DESIGN FOR DEPENDABILITY
Chair: Udo Voges (Forschungszentrum Karlsruhe, DE)

Integrity Static Analysis of COTS/SOUP
Peter Bishop, Robin Bloomfield (City University and Adelard, GB), Tim Clement, Sofia Guerra, and Claire Jones (Adelard, GB)

SAFECOMP 2003 Social Dinner
SESSION 3: SECURITY AND FORMAL METHODS
Chair: Stefan Wittmann (BSI, DE)

Modelling and Verification of Layered Security Protocols: A Bank Application
Johannes Grünbauer (Munich University of Technology, DE),
Helia Hollmann (Secaron AG, DE),
Jan Jürjens, and Guido Wimmel (Munich University of Technology, DE)

A Constraint Framework for the Qualitative Analysis of Dependability Goals: Integrity
Stefano Bistarelli (Università “G. D’Annunzio” di Chieti-Pescara and CNR, IT) and Simon N. Foley (University College, IR)

Software Tamper Resistance Using Program Certificates
Hongxia Jin (IBM Almaden Research Center, US),
Gregory F. Sullivan, and Gerald M. Mason (Johns Hopkins University, US)

18:00-19:00 PANEL: DEPENDABLE EMBEDDED SYSTEMS
Chair: Erwin Schoitsch (ARC Seibersdorf research, AT)

Dependable Embedded Systems: Roadmap and Challenges
From Requirements to Maintenance

THURSDAY, 25 SEPTEMBER
09:00-10:00 KEYNOTE TALK
Developing High Assurance Systems: On the Role of Software Tools
Constance Heitmeyer (Naval Research Laboratory, US)
María José Manzano, and Javier Pozo (Universidad de Alcalá, ES)

**Dependable Communication Synthesis for Distributed Embedded Systems**
Nagarajan Kandasamy (Vanderbilt University, US), John P. Hayes (University of Michigan, US), and Brian T. Murray (The Delphi Corporation, US)

16:00-16:30 **COFFEE BREAK**

16:30-18:00 **SESSION 7: TOOLS FOR DEPENDABLE DESIGN**
Chair: Michael Harrison (University of York, GB)

**Enhancing Software Safety by Fault Trees: Experiences from an Application to Flight Critical SW**
Wolfgang Weber, Heidemarie Tondok (EADS Military Aircraft, DE), and Michael Bachmayer (Bachmayer GmbH, DE)

**On the Role of Traceability for Standards Compliance: Tracking Requirements to Code**
P. A. J. Mason (University of Newcastle upon Tyne, GB), A. Saeed (Advantage Business Group, GB), and S. Riddle (University of Newcastle upon Tyne, GB)

**Tools Supporting the Communication of Critical Domain Knowledge in High-consequence Systems Development**
Kimberly S. Wasson, John C. Knight, Elisabeth A. Strunk, and Sean R. Travis (University of Virginia, US)

19:30... **SAFECOMP 2003 SOCIAL DINNER AT OUR DYNAMIC EARTH**

Safecomp 2003, Our Dynamic Earth, Holyrood Road, Edinburgh EH8 8AS

**FRIDAY, 26 SEPTEMBER**

09:00-10:00 **KEYNOTETALK**
TBA
Ross Anderson (Computer Laboratory, University of Cambridge, GB)

10:00-11:00 **SESSION 8: DEPENDABILITY OF CRITICAL INFRASTRUCTURES**
Chair: Chris Johnson (University of Glasgow, GB)

**Security Policy Configuration Issues in Grid Computing Environments**
George Angelis, Stefanos Gritzalis, and Costas Lambrinoudakis (University of the Aegean, GR)

**Dependability and Survivability of Large Complex Critical Infrastructures**
Sandro Bologna, Claudio Baldacelli, Giovanni Dipoppa, and Giordano Vicoli (ENEA C.R.Casaccia, IT)

11:00-11:30 **COFFEE BREAK**

11:30-13:00 **SESSION 9: HAZARD AND SAFETY ANALYSIS**
Chair: Felix Redmill (University of Newcastle upon Tyne, GB)

**Safety Assessment of Experimental Air Traffic Management Procedures**
Alberto Pasquini and Simone Pozzi (Deep Blue s.r.l., IT)

**The Application of Causal Analysis Techniques for Computer-related Mishaps**
Chris Johnson (University of Glasgow, GB)

**Reuse in Hazard Analysis: Identification and Support**
Shamus P. Smith and Michael D. Harrison (University of York, GB)

13:00-14:00 **LUNCH**

14:00-15:00 **SESSION 10: DESIGN FOR DEPENDABILITY**
Chair: Janusz Górski (Technical University of Gdañsk, PL)

**The Characteristics of Data in Data-intensive Safety-related Systems**
Neil Storey (University of Warwick, GB)
and Alastair Faulkner (CSE International Ltd., GB)

**Using IEC 61508 to Guide the Investigation of Computer-related Incidents and Accidents**
Chris Johnson (University of Glasgow, GB)

15:00-15:30 **SAFECOMP 2003 CLOSING**

15:30-16:00 **COFFEE BREAK**
The mission of EWICS is:

"To promote the economical and efficient realisation of programmable industrial systems through education, information exchange, and the elaboration of standards and guidelines"

EWICS is active in the field of Programmable Electronic Systems reliability, safety and security. It has members from most European countries, covering various fields of interests and affiliations, as well as from the USA. To achieve the above goals we

- assess the state of the art in methods and tools for critical software development and maintenance in industrial environments
- develop standards and guidelines for the development and assessment of safe and secure systems
- disseminate information and knowledge in this field
- exchange technical knowledge between members

To receive further information about the EWICSTC7 meetings please visit the EWICSTC7 web site or contact the EWICSTC7 Chair:

Udo Voges
Forschungszentrum Karlsruhe
Institut für Angewandte Informatik
Postfach 3640, 76021 Karlsruhe, Germany

E-mail: voges@iai.fzk.de

REGISTRATION

Please register on the SAFECOMP 2003 web site. Notice that you may also request (by the online registration form) an Accommodation. The Conference Staff at the National e-Science Centre (NeSC) will book an accommodation according to your requirements (i.e., arrival and departure dates, type of accommodation, and accommodation budget). Once the Conference Staff booked an accommodation, you will then need to arrange for the accommodation payment directly with the hotel. All the hotels have been selected by the NeSC and they are conveniently located nearby the NeSC and the Edinburgh City Centre. The following table shows the different Registration Rates - Conference Fees in British Pounds £.

<table>
<thead>
<tr>
<th>Registration Type</th>
<th>Early (by 31 August)</th>
<th>Late / On site(1) (After 31 August)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker (2)</td>
<td>250 (by 7 July2)</td>
<td>350</td>
</tr>
<tr>
<td>EWICS Member</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Non-member</td>
<td>300</td>
<td>350</td>
</tr>
<tr>
<td>Student (3)</td>
<td>170</td>
<td>200</td>
</tr>
<tr>
<td>Exhibitor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(includes 1 delegate registration)</td>
<td>400</td>
<td>450</td>
</tr>
<tr>
<td>Tutorial 1 (4)</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Tutorial 2 (4)</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Tutorial 3 (4)</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Companion Dinner Ticket</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

1. Due to limited space we cannot guarantee to accept on site registrations. You are strongly advised to register in advance.
2. The Speaker early registration is conditional for the publication of the accepted paper in the proceedings.
3. A proof of student status must be attached.
4. Tutorial registrations include: access to the specific tutorial; a copy of the tutorial notes/slides; lunch and coffee breaks.

EXHIBITION AND TOOL FAIR

A dedicated space will be organised for Exhibition and Tool Fair. Organisations requiring to show their own stands and products should register as Exhibitor according to the instructions provided in the conference web site.

SPONSORS PROGRAMME

To become a sponsor of SAFECOMP 2003, please refer to the information about the Sponsors Programme in the conference web site.

CONFERENCE VENUE

National e-Science Centre
e-Science Institute
15 South College Street
Edinburgh EH8 9AA
United Kingdom
One of the greenest and most beautiful cities in Europe, Edinburgh annually attracts over 2 million visitors, not just for its architecture, but as a city rich in social, cultural, learning and sporting facilities. Each year it hosts internationally-renowned events such as the Edinburgh International Arts, Fringe, Film, TV and Science festivals. Yet it is more than just a tourist attraction. Edinburgh is a thriving commercial and financial centre, the site of the new Scottish Parliament and a gateway to the coastline, hills and open country of the Scottish Highlands. Edinburgh is a beautiful, dynamic, prosperous European city that benefits from a unique architectural heritage and a magnificent natural setting.

Edinburgh is also home to a thriving software industry supporting the major financial institutions in the city and creating new products. Over the past years Edinburgh has seen a huge increase in start-ups in the software sector. Close to Edinburgh, the Silicon Glen houses major microelectronics, communications and software design companies. Scottish Enterprise, the development agency for Scotland, places a strong emphasis on developing industries providing key infrastructure for the knowledge economy. This is based on the firm foundation of a strong supply of appropriately-qualified graduates from the ten universities in central Scotland.

FURTHER INFORMATION AND ENQUIRIES
www.safecomp.org
info@safecomp.org