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FMICS 2005 - 10th International Workshop on Formal Methods for Industrial Critical Systems

by Mieke Massink and Tiziana Margaria

This 10th edition of the International Workshop on Formal Methods for Industrial Critical Systems (FMICS), a series of workshops organized by the homonymous ERCIM Working Group, was a good occasion to re-examine the use of formal methods in industry over the last ten years, and to outline a promising way forward for the next decade.

For ten years, the FMICS workshops have striven to promote research on and support the improvement of formal methods and tools for industrial critical applications. They are intended to provide a common forum for scientists and industrial professionals to exchange experiences related to the development and application of formal methods. The FMICS Working Group has achieved both broad public visibility and good interaction with the wider scientific community. These merits were recognized by the ERCIM board of directors, which granted the FMICS Working Group the ERCIM award for the most successful Working Group of 2002.

Previous workshops were held in Oxford (March 1996), Cesena (July 1997), Amsterdam (May 1998), Trento (July 1999), Berlin (April 2000), Paris (July 2000), Malaga (July 2002), Trondheim (July 2003) and Linz (September 2004). This year the FMICS workshop was co-located with the European Software Engineering Conference (ESEC) and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE). Together these comprise an internationally renowned forum for researchers, practitioners and educators in the field of software engineering, held in the beautiful city of Lisbon in Portugal. The workshop was organized by the Istituto di Scienze e Tecnologie della Informazione - A. Faedo of Pisa, Italy, and the University of Göttingen in Germany. Thirty participants from academia and industry from about thirteen countries attended the workshop.

Fourteen contributions were selected from 27 good-quality submissions, covering both industrially relevant theoretical topics as well as industrial case studies.

Two invited speakers gave excellent presentations. Giorgios Koutsoukis, replacing Luis Andrades from ATX Software SA, Lisbon, gave a presentation on the experience of ATX with the application of formal and rigorous techniques and methods in real projects. Christel Baier from the University of Bonn gave a presentation on the most recent developments in the quantitative analysis of distributed randomized protocols.

A special session was arranged for the presentation of a follow-up to the much cited and widely discussed article 'Ten Commandments of Formal Methods' by Jonathan P. Bowen and Michael G. Hinchey, which was published ten years ago. Both authors joined the workshop to present a perspective on ten years of the industrial application of formal methods, and set the stage for a lively discussion on progress in the decade to come. The organizers are very happy that both authors chose the FMICS workshop as the forum in which to present their new ideas.



Pedro Merino Gomez, University of Malaga, Spain, giving a presentation of his paper during the workshop. He received the 2005 EASST best-paper-award. Pedro Merino Gomez has been elected the next chair of the FMICS working group.

The award for the best paper was granted this year to de la Camara, Gallardo, Merino and Sanan for their excellent paper on the application of model checking to distributed software systems that use API Sockets and the network protocol stack for communications. The award was granted with the support of the European Association of Software Science and Technology (EASST). Other papers presented at the FMICS05 workshop included 'An Approach to the Pervasive Formal Specification and Verification of an Automotive System', 'Developing Critical Systems with PLD Components', 'Test Coverage and System Development Based on Lustre', 'Integrated Formal Methods for Intelligent Swarms' and many others.

The proceedings of the workshop were published as ACM-SIGSOFT paper proceedings and have also appeared in the ACM Digital Library. Selected papers will be invited for publication in a special issue of the International Journal on Software Tools for Technology Transfer. The organizers wish to thank ESEC/FSE for hosting the FMICS05 workshop and taking care of many administrative aspects, ACM SIGSOFT for their sponsorship and ERCIM for its financial support of the workshop. Additionally, the organizers would like to thank EASST (European Association of Software Science and Technology), ATX Software, and the institutions CNR-ISTI and the University of Göttingen for supporting this event.

Link:

FMICS Working Group:

<http://www.inrialpes.fr/vasy/fmics/>

Please contact:

Pedro Merino Gómez, ERCIM FMICS Working Group coordinator, Universidad de Málaga / SpaRCIM

Tel: +34 952 132752

E-mail: pedro@lcc.uma.es

<http://www.lcc.uma.es/~pedro>