



SEEFM05 2nd SOUTH-EAST EUROPEAN WORKSHOP IN FORMAL METHODS



REFLECTIONS – CONCLUSIONS

The 2nd South-East European Workshop in Formal Methods took place in Ohrid on the 18th – 19th of November 2005. SEEFM05 was organised by SEERC and CITY College and locally organised by Sts. Cyril and Methodius University and hosted at Metropol hotel in Ohrid. The event was sponsored by BCS-FACS group.

The workshop has attracted participation from scientists, academics and researchers from Institutes and Universities all over the world, but especially from Europe. More specifically, out of the 17 papers accepted for presentation (10 full papers and 7 discussion papers), 3 of them were from Greece, 3 from Romania, 3 from Germany, 2 from France, and 1 from UK, Finland, Austria, Russia, Brazil, Algeria. We also had two invited papers from UK. In 8 papers, at least one author is related to South-East Europe. The accepted papers were:

- Jari Veijalainen, Eleni Berki, Jari Lehmonen, Pasi Moisanen, "Implementing a New International Paper Mill Efficiency Standard - Using Computational Correctness Criteria to Model and Verify Timed Events"
- Maria Kourkouli, George Hassapis, "Application of the timed automata abstraction to the performance evaluation of the architecture of a bank on-line transaction processing system"
- Dimitris Dranidis, George Eleftherakis, Petros Kefalas, "Object-based language for generalized state machines"
- Christopher Thomson, Mike Holcombe, "Using a formal method to model software design in XP projects"
- Fevzi Belli, Christof J. Budnik, Axel Hollmann, "Formalization of Modeling, Analysis and Testing of Interactive Systems using Statecharts"
- Peter Massuthe, Wolfgang Reisig, Karsten Schmidt, "An Operating Guideline Approach to the SOA"
- Richard Banach, Jean-Paul Bodeveix, Mamoun Filali, Michael Poppleton, "Dynamic aspects of retrenchments through temporal logic"
- Cristina Luca, "Context-free grammar for a two-dimensional language"
- Carlos Bazilio, Edward H. Haeusler, and Markus Endler, "Binding Network Topologies to Specifications via Pronouns"
- Victor V. Kuliainin, Vitaliy A. Omelchenko, Olga L. Petrenko, "Active Learning Facilitates Success of Formal Methods in Practice"
- Michael Barth, "A Formal Model for Performance Assessment in a Simulative Environment"
- Laura Ildiko Kovacs, Nikolaj Popov, Tudor Jebelean, "A Verification Environment for Imperative and Functional Programs in the Theorema system"

- Miloud Rached, Jean-Paul Bodeveix, Mamoun Filali, Odile Nasr, "A Timed B Method for Modelling Real Time Reactive Systems"
- Thouraya Bouabana-Tebibel, and Mounira Belmesk, "Object-oriented workflow formalization"
- Valentina Vujocevic, George Eleftherakis, "Improving Formal Methods' Tools Usability"
- Anca Vasilescu, "Algebraic model for the JK flip-flop behaviour"
- Oana Georgescu, "Problem Solving with Different Models"

Registration was free. There were 48 people registered for the workshop. The nationalities of the participants are as follows: FYRoM 15, Greece 8, UK 6, Romania 5, Germany 3, France 3, Algeria 1, Turkey 1, Hungary 1, Bulgaria 1, Serbia & Montenegro 1, Slovenia 1, Russia 1, Brazil 1 and others.



SEEFM05 workshop participants

The event commenced by welcome speeches from Dr.G.Eleftherakis co-chair of SEEFM05 and Dr.P.Ketikidis, Vice-Principal of CITY College and Director of SEERC. Both expressed their satisfaction about the number of participants and their willingness to find ways of promoting and organizing similar workshops in the future as well as establishing links between academics in this research area in South-East European states.

Prof.J.Bowen from the University of London South Bank and Prof.J.Derrick from the University of Sheffield were the invited speakers. Prof.J.Bowen (chair of BCS-FACS) re-examined the original ten important requirements (or “commandments”) for formal developers to consider and follow, based on knowledge of several industrial application success stories, considering their validity in the light of a further decade of industrial best practice and experiences. Prof.J.Derrick described recent work which seeks to apply model-checking techniques to the verification of Erlang code.



Prof. J. Bowen



Prof. J. Derrick

There were three sessions that followed. Session A and C were presentations of full papers and session B was presentation of discussion papers. Session A was more on applied formal methods. Session B and Session C were on theoretical foundations, verification and tools. All papers were very interesting and raised stimulating discussions among the participants. Each presentation of full paper lasted for 20 minutes allowing 5 minutes for questions and each presentation of discussion paper lasted for 10 minutes allowing 10 minutes of questions and discussion.

At the end, there was a panel discussion, which also involved questioning from the participants, chaired by Dr.G.Eleftherakis, on the general topic: "Formal Methods, Practical dimensions: Challenges in the business world". The panel consisted of Prof.J.Bowen (UK), Prof.J.Derrick (UK), Prof.W.Reisig (Germany) and Dr.E.Berki (Finland). The outcomes of this discussion are summarized as follows:

- Formal methods is a hot research area but there is still no evidence of wide acceptance
- Industry needs to be convinced about the importance of using Formal Methods
- Participants from the industry should be invited to express their opinion
- Researchers from South-East Europe should join the existing formal methods organizations in Europe.
- Education on Formal Methods should be provided to students who will identify the future needs of the industry
- The particular characteristics of people in SEE could be identified and due to their strong mathematical background, there might be a chance there to use these people in disseminating the practice on Formal Methods
- The workshop provided a good chance to establish strong links between academics in SEE countries and those links should be exploited.

SEEFM05 was once more a satellite workshop of the Balkan Conference in Informatics (2nd). The proceedings of the workshop were electronically published as a CD, available on request by secretariat at seefm05_secretariat@city.academic.gr. The proceedings will be published as an edited volume under the title: "Formal Methods: Challenges in the business world" by SEERC.

A number of selected papers will be peer reviewed once more and will be included in a post-proceedings volume in the forthcoming issue of the International Journal Annals of Mathematics, Computing and Teleinformatics (AMCT) (<http://journals.teilar.gr/amct/>).

Best Paper / Student presentation prizes, sponsored by BCS-FACS, of one year's FACS membership and one year's subscription to the FAC journal were awarded

based on a voting procedure between all the participants. Best Paper presentation was awarded to Prof. W.Reisig for the paper "An Operating Guideline Approach to the SOA" authored by Peter Massuthe, Wolfgang Reisig, Karsten Schmidt, and Best Student presentation prize to Ms. Laura I.Kovacs for the paper "A Verification Environment for Imperative and Functional Programs in the Theorema system" authored by Laura Ildiko Kovacs, Nikolaj Popov and Tudor Jebelean.



Prof. W.Reisig gets the award for the Best Paper Presentation from Prof. J.Bowen



G.Eleftherakis announces the Best Student Presentation and Prof. J.Bowen gives the award to Ms. Laura I.Kovacs

Also BCS-FACS sponsored a student bursary of 150 pounds to help with attendance and presentation at SEEFM by a researcher based in the UK. The researcher was Christopher Thomson, a PhD student from the Computer Science department of the University of Sheffield, who presented the paper "Using a formal method to model software design in XP projects", authored by Christopher Thomson and Mike Holcombe.

The workshop included a gala-dinner in a traditional restaurant in Ohrid offered to all the participants of SEEFM05.

Conclusions

- The workshop was the second attempt to bring people from SEE together, based on their common interest in Formal Methods.
- All participants expressed the opinion that the workshop is to be continued on a biannual basis.
- It is thought that the workshop could be hosted in Thessaloniki in alternate years and the other in other interested parties (e.g. Timisoara, Romania).
- The Steering Committee could be extended keeping it still small and flexible.
- A web page under SEEFM page (www.seefm.info) containing all links and email addresses of people in SEE should be constructed as a means to disseminate information and practices. The page should initially contain info collected in the two workshops, e.g. people, institutions, research groups, interests, projects, tools, courses etc.
- Common projects should be sought between various institutions in SEE with common research interests in Formal Methods
- Every effort should be made to involve people from industry.

George Eleftherakis
Co-Chair of the SEEFM05
On behalf of the Organising Committee