

MT-LAB

A VKR CENTRE OF EXCELLENCE

MT-LAB SCIENTIFIC BOARD:

DTU: Flemming Nielson (director), Hanne Riis Nielson, and Bo Friis Nielsen.

AAU: Kim G. Larsen (vice-director), Rafael Wisniewski, and Arne Skou.

ITU: Jens Christian Godskesen, and Andrzej Wąsowski.

FORMATS 2011

The 9th International Conference on *Formal Modeling and Analysis of Timed Systems* was held by MT-LAB at Hotel Phønix, Aalborg, on 21st-23rd September 2011. The conference was attended by 65 participants and featured as distinguished invited speakers: *Rajeev Alur* from University of Pennsylvania (USA), *Oded Maler* from VERIMAG in Grenoble (France) and *Boudewijn Haverkort* from University of Twente (the Netherlands). The conference brings together researchers with an interest in timing aspects of systems from a variety of computer science domains and is as such in line with the study of quantitative formalisms in MT-LAB.

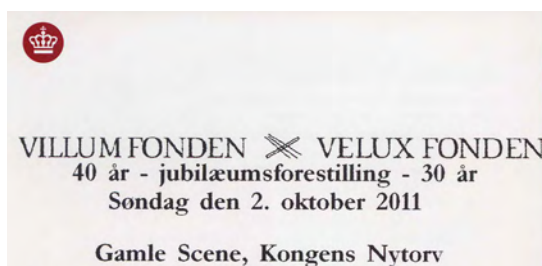
MT-LAB MEETING WITH ADVISORY BOARD

The third meeting with the advisory board took place on 24th-25th October 2011. It featured a day with a general overview of the project together with presentations of the scientific highlights from the last year:

- MT-LAB in a Nutshell (by Flemming Nielson)
- Abstraction and Refinement for Probabilistic Processes (by Andrzej Wąsowski)
- Layered Fixed Point Logic (by Piotr Filipuik)
- Energy Games (by Jiri Srba)
- Robustness for Timed Automata (by Claus Thrane)
- The Logic of XACML (by Hanne Riis Nielson)
- Hybrid Models and Timed Games (by Rafael Wisniewski)
- Statistical Model Checking in UPPAAL (by Kim G. Larsen)

The following day the scientific board of MT-LAB presented the new focus areas for the advisory board and it was followed by interesting discussions.

CONGRATULATION!



MT-LAB congratulates the VILLUM and VELUX foundations with their joint 70 years anniversary. Members of MT-LAB's scientific board participated in the celebration in the Royal Theatre.



FORMATS INVITED SPEAKERS



Rajeev Alur gave a talk on *Interfaces for control components*.



Oded Maler, introduced by Kim G. Larsen, talked about *Performance evaluation of schedulers in a probabilistic setting*.



Boudewijn Haverkort gave a talk with the title *Formal modeling and analysis of timed systems: technology push or market pull?*

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15TH-26TH AUGUST 2011

Dr. *Jia Liu* from the Institute of Software Chinese Academy of Sciences, Beijing, visited MT-LAB to discuss further collaboration on the analysis of cryptographic protocols.

25TH-30TH AUGUST 2011

Associate professor *Luca Viganò* from Verona University visited MT-LAB to collaborate on the analysis of cryptographic protocols. This is part of a long-term research collaboration with Sebastian Mödersheim.

15TH SEPTEMBER 2011

Congratulations to Sebastian Bauer, Kim G. Larsen, Axel Legay, Ulrik Nyman and Andrzej Wasowski for obtaining the Best Paper Award at FACS 2011 for the paper *A Modal Specification Theory for Components with Data*.



16TH-20TH SEPTEMBER 2011

Mr. *Roberto Vigo* from Padova University visited MT-LAB to discuss possibilities for future collaboration. Roberto is a master student of professor Gilberto Filé and he will start as a PhD student associated with MT-LAB at the end of the year.

16TH-28TH SEPTEMBER 2011

Professor *Chris Hankin* from Imperial College London visited MT-LAB and gave presentations on the analysis of smart energy systems.

24TH-28TH OCTOBER 2011

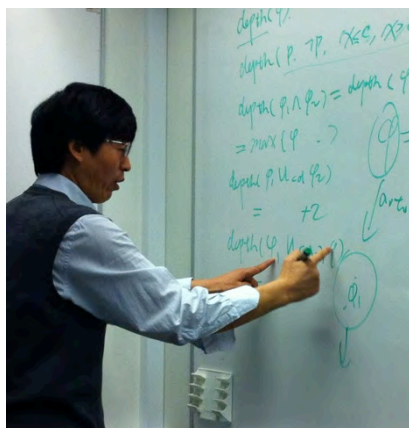
PhD student *Hans-Jörg Peter* from the Reactive Systems Group at Saarland University visited MT-LAB and gave a talk on *Synthesizing Certificates in Networks of Timed Automata*.

VISITING RESEARCHER: ALESSANDRA DI PIERRO

Alessandra Di Pierro is an assistant professor at the university in Verona and for more than a decade she has worked on *Probabilistic Abstract Interpretation*, thereby combining qualitative and quantitative analysis techniques. In recent years she has studied applications within security. During her visit at MT-LAB in August she gave several talks on this topic.



VISITING RESEARCHER: GUANGYUAN LI



Guangyuan Li is a researcher at the Institute of Software, Chinese Academy of Science, Beijing, and is also involved in the IDEA4CPS collaboration between China and Denmark. Guangyuan Li is an expert on the *verification of timed automata*. He visited MT-LAB in September and October with the goal of collaborating with the UPPAAL team on extending the capabilities of the statistical model checking engine.

HIGHLIGHTS FROM MT-LAB'S MIDTERM REPORT

After 2½ years MT-LAB has handed in its midterm report reporting on:

- A total of **26 PhD students** have been/are associated with MT-LAB; 6 of those have completed their studies.
- A total of **132 publications**, many of which have appeared in journals or high-profile conferences.
- An **international guest program** with many visiting PhD students, post-docs, senior researchers, and guest professors.
- **High international visibility** through organisation of PhD schools, conferences, and working groups.
- More than 100 local seminars, meetings, etc. with international visitors.
- The MT-LAB grant only bears a fraction of the cost of these activities thanks to co-financing from other sources.