

ETAPS Daily



Friday, 30 March 2012

Issue 7



The stage building of the Song Festival Grounds in the evening of our banquet

Where are we from?

The ETAPS 2012 registration numbers are not fully final yet, but as of today we have 619 registered participants from 41 countries and 30+ organizers, volunteer helpers and local participants.

The highest participant numbers are from these countries: Germany (107), UK (86), France (85), USA (52), the Netherlands (42), Italy (40), Denmark (22), Japan (21).

LEARN ABOUT THIS PLACE

Estonian: the strange language

The language we speak is Estonian. Estonian is a Finno-Ugric language and closely related to Finnish, Karelian and other nearby small languages. It is distantly related to Hungarian. Finno-Ugric languages are not Indo-European. While Estonian has words from Swedish, German and Russian, it is not related to these languages ge-

netically.

There are some dialects; the most marked are Võro and Seto, spoken in the Võru and Põlvamaa counties.

Estonian has no articles and grammatical gender.

Estonian employs the Latin script plus the characters \tilde{o} , \ddot{a} , \ddot{o} , \ddot{u} , \check{s} , \check{z} .

A ROOM WITH A VIEW

The Tallinn Bay

If you look out of the balcony window here in the conference center, it is quite likely that you will see some large passenger ferries in dock. Regular ferry lines connect Tallinn to Helsinki (just 80 kms away) and Stockholm. There are two islands in sight (behind Paljassaare and Viimsi peninsulas). On the left there is Naissaar (Nargen, Nargö), on the right Aegna (Wulf, Ulfsö). Summertime these are connected to Tallinn by boat lines and make popular leisure spots. The islands are next to uninhabited, but there are a couple of summerhouses. Naissaar, where the conductor Tõnu Kaljuste has a summer place, also has an "opera house" where he arranges concerts and theatre performances summertime. Both islands are rich in fortification structures built before and during WWI (as part of Peter the Great's Naval Fortress). Before WWII, there were 4 villages on Naissaar. The telescope maker Bernhard Schmidt was born on the island.

Weather forecast





Tomorrow $0 \parallel 4 \text{ °C}$



Sunday $0 \parallel 3$ °C

End of the main conferences

Today we will hear the FoS-SaCS invited talk, given by **Glynn Winskel**, about bicategories and concurrent games.

These conferences will have their last regular sessions today:

CC Compiler Construction

FoSSaCS Foundations of Software Science and Computation Structures

TACAS Tools for Analysis and Construction of Systems

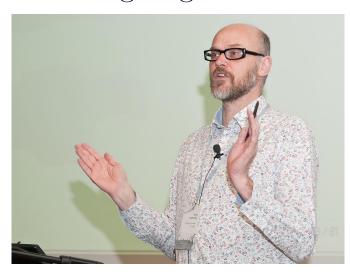


http://www.etaps.org/2012

ETAPS 2012 local organizers

ETAPS DAILY INTERVIEWS HOLGER HERMANNS

Modeling of grids



You talked about the growing importance of quantitative modeling and stochastic model-checking tools. Could you outline the possible ways how this research could influence our every-

day lives in the near future (or perhaps is doing so already today)?

Let me be serious here. The design of next generation Networks on Chips are being optimised with these techniques as we speak. This happens in the headquarter of Europe's largest chip manufacturer, STMicroelectronics. They likely run your next Smartphone.

You also pointed out that your research has shown that legislations meant to increase the stability of power grids can actually have reverse effects. Do you have any other examples of interest where stochastic model-checking has been able to discover suprising effects?

I should first admit that this very observation is not overly suprising if one has some basic insight in distributed control. So, it is confirmed by our studies. Another surprising insight – made by Marielle Stoelinga already back in 1999 – is that the IEEE Firewire protocol can run faster by using an unfair coin in the initialisation phase. Then, it is still perfectly surprising to me that bikes brake even without wires.

ETAPS DAILY INTERVIEWS FRANÇOIS BODIN

Directives



You made the case that directive-based approaches are currently the most promising (or one or the most promising) tracks for heterogeneous many-cores. Surely you must also be aware of potential pitfalls and bottlenecks. Which are they?

There are, I believe, two main pitfalls. The first one is

that, if misused, they may break the code semantics. Code generation is done under the control of the programmer and the compiler may not be able to point out mistakes. The second one is that starting from a serial code this is limited by the expressiveness of what you can easily construct. It is OK for data parallelism coming from loop nests, but it is not so obvious for more complex forms of parallelism.

You emphasized auto-tuning. How do you see should one systematically go about it? (You stressed the need for a "standard interface".)

The idea we are defending is that the programmer should provide (maybe with the help of some tools) the range of code transformations to look at and this exploration should be performed automatically according to the available computing resources (e.g., a cluster). So there are two components here: 1) the programming directives that should allow the programmer to specify code transformations, 2) the interface/callbacks the compiler generates, so that exploration tools (e.g., Periscope) can connected to at execution time to achieve some optimization objectives (e.g., execution time or energy consumption).

The workshops tomorrow and the day after will be held at the Tallinn University of Technology campus, Building X (Akadeemia tee 3), as were the pre-conference workshops, mostly on the 4th floor; this is also where the registration and coffee breaks will be. For instructions about how to get to the workshops place, please see the programme book.