European Joint Conferences on THEORY AND PRACTICE OF SOFTWARE 2002

Les Dernières Nouvelles d'ETAPS

The Newsletter of the European Joint Conferences on Theory and Practice of Software, ETAPS 2002

Number 6 — Welcome Edition: April 11, 2002

ETAPS Award Winners

The ETAPS'02 award winners have been announced yesterday, wednesday april 10th, at the ETAPS dinner.

- EAPLS: M. Kandemir, I. Kolcu and I. Kadayif. *Influence of Loop Optimization on Energy Consumption of Multi-Bank Memory Systems.*
- EASST: K. Havelund, G. Rosu. *Synthesizing Monitors for Safety Properties.*
- EATCS: E. Goddard, Y. Metivier. *Characterisation of Families of Graphs in which Election is Possible.*
- Organisers best tool demo award: T. Amnell, E. Fersman, L. Mokrushin, P. Petterson, Wang Yi *TIMES - A Tool for Modelling and Implementation of Embedded Systems.*

Extracts from the welcome speech by Farid Ouabdesselam, Joseph Fourier University First Vice-President

Dear participants to ETAPS,

When my colleagues asked me to deliver a welcome message with an emphasis on the history of Computer Science in Grenoble, I must say that I considered their offer as too heavy a responsability, even though I appreciated the honour that falls to me. Indeed, I do measure the strength and the richness of this history, but I hardly know a few facts. So, please, be indulgent with me since I shall only give you a glimpse of that 50 year long history, and since all the facts I am going to refer to come from my readings on this topic.

Everything started when Jean Kuntzmann (after whom the IMAG chair building is named, and who was a mathematician) decided to give a course on mathematical tools for physicists. This was back in 1947. In that course, Jean Kuntzmann had already introduced elements of computation on electrical machines. The period from 1947 to 1957 corresponds to the initial development of the applied mathematics side of IMAG which was largely amplified after Noël Gastinel joined Grenoble in 1957. From 1958, Jean Kuntzmann worked at the successful and fruitful development of Computer Science with Louis Bolliet and Bernard Vauquois (who came from Paris). The former (who was Jean Kuntzmann's assistant) launched on extended program on programming language design and compiling which continued as projects on software engineering. The later gave the initial impulse to research activities on logics, automata theory and programming which he led to an integrated project on natural language analysis and translation. Concurrently, Jean Kuntzmann did not miss to set a program on hardware and circuits. All these different research lines are still very active locally and have acquired an international reputation. Several Grenoble students who did their theses along these separate lines, have helped to define a convergent research direction which now has its translation into ETAPS.

As far as research is concerned, both aspects of Computer Science, i.e. technology and fundamentals, have always been studied at IMAG. But in the sixties and up to the mid seventies Grenoble was rather well known for its research in language design and compiling, and natural language translation. Several IMAG young researchers contributed significantly to the development of the domains shared by ETAPS participants. I will quote three of them who are carrying on their career outside Grenoble. This morning, Suzanne Graf mentionned that Patrick Cousot (one of ETAPS invited speaker) did his PhD thesis on abstract interpretation at IMAG. Earlier, Jean Abrial the inventor of both the Z and B methods had also conducted research at IMAG on an abstract machine model and language for data base specification. The first definition of Z borrowed most of its features from this model and this language. Even earlier, Alain Colmerauer in his PhD put forward most of the ground principles of Prolog which he later developed in Marseilles. In the early sixties, IMAG had already strong research relationships with growing research centers in Europe. In particular, there were tight exchanges with Prof. Bauer from Münich (the inventor of the term "software engineering") who stayed here on several occasions.

In order to summarize the early times of computer science courses and education at Grenoble University, let me just give you a few figures and dates, and let me stress some outstanding facts. 1957-58 1st course on programming for university students 1959 1st course on programming for industry people anxious to get a training in programming. Note the still lasting investment and interest of academia in training its industrial partners. Note also that the language used in these courses was Algol 60 (and not the most popular Fortran). Since then, the Grenoble University faculty members have always preferred to base their teaching on well defined and well founded languages over in vogue languages. 1959 Opening of the Bachelor curriculum in Applied Math 1st course or Logics and Programming 1966 Opening of the Bachelor curriculum in Computer Science (150 students). At the graduate level, *the 1st thesis in Computer Science was defended in 1961. In 1966 there were already 18 PhD students among whom 5 were coming from other European countries.*

During the heroic times of computer science, our elders have always succeeded in building strong ties with local industry. The university and the industry used to share their computation facilities and many thesis subjects were brought by industry partners. This cooperation has been lasting for years and it is no surprise that many international firms have located their research centers in Grenoble. IBM did that from 1966 to 1975. France Telecom installed its research center (CNET) in circuit design at the beginning of the seventies. Presently HP, XEROX, BULL, SUN Micro Systems, as the Open Software Foundations in a recent past, all have research centers in the Grenoble area. The relationships with industry resulted also in remarkable spin up successes. Among them, I must mention Cabri Géomètre, the geometry interactive software which is available on all Texas Instruments 92 pocket calculator. Now the interactions with industry in the domains you are concerned with as ETAPS community members are exemplified in Grenoble through the Center for Software Technologies. The building is under construction. This center will host platforms for joint research and industrial transfer projects.

Let me finish with a few according to the 2002 edition of the report by the " Observatoire des Sciences et Techniques ": Grenoble ranks in the 30 best sites in Europe :

- *for its scientific activity (for France these include Paris, Lyon and Toulouse)*
- *for its technological activity (after Paris, but ahead of Lyon)*
- *for attracting research an development laboratories of multinational firms (afer Paris)*
- *for the participation of its laboratories in the European Union's 5th Framework Program for research and development (after Paris, but ahead of Lyon and Toulouse), particularly in the fields of information and communication science and technologies. My own university (named after the famous mathematician Joseph Fourier) ranks first among the French universities participating in this program ; it has the largest number of contracts and the highest financial support.*

Enjoy the ETAPS meetings, enjoy your stay in Grenoble.

Farid Ouabdesselam, Joseph Fourier University First Vice-President

Weather Forecast for Thursday

Temperature between 4° Celsius at 8h00 and 13° Celsius at noon. The sun shall show up in the afternoon.

Programme of Thursday, April 11, 2002

<table>
<tr><td>9h00–10h00</td><td colspan="4">FOSSACS invited talk
Amphi Weil
Bruno Courcelle: Semantical Evaluations as Monadic Second-order Compatible Structure Transformations</td></tr>
<tr><td>10h00–10h45</td><td colspan="4">Coffee break</td></tr>
<tr><td>10h45–12h45</td><td>TACAS
Amphi E
Chair:
Claude Jard
Partial-order and simulation techniques</td><td>FOSSACS
Amphi F022
Chair:
Julian Bradfield
Infinite State Systems</td><td>CC
Amphi F018
Chair:
Analysis and Optimization</td><td>SPIN
Tutorials</td></tr>
<tr><td>12h45–14h15</td><td colspan="4">Lunch</td></tr>
<tr><td>14h15–15h15</td><td colspan="4">SPIN invited talk
Amphi Weil
Ed Clarke: SAT-based Counterexample Guided Abstraction Refinement</td></tr>
<tr><td>15h15–16h00</td><td colspan="4">Coffee break</td></tr>
<tr><td>16h00–17h30</td><td>TACAS
Amphi E
Chair:
Perdita Stevens
Debugging with Model checking</td><td>FOSSACS
Amphi F022
Chair:
Antoine Petit
Logic</td><td>CC
Amphi F018
Chair:
Low-level Analysis</td><td rowspan="3">SPIN
Amphi MJK
Chair: Matt Dwyer
Software Model Checking</td></tr>
<tr><td>17h30–17h45</td><td colspan="3">Short break</td></tr>
<tr><td>17h45–18h45</td><td></td><td>FOSSACS
Amphi F022
Chair:
Doron Peled
Message Sequence Charts</td><td>CC
Amphi F018
Grammars and Parsing</td></tr>
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