European Joint Conferences on Theory And Practice of Software 2003

Życie ETAPS-u

The Newsletter of the European Joint Conferences on Theory and Practice of Software, ETAPS 2003

Number 9 Sunday, April 13, 2003

Invited talks

On Saturday we had a lot of workshop invited talks. The range of topics was very wide. On FAMAS we could get to know, how to form a coalition among mobile agents (O. Shehory) and which kind of model checking is best suited for applications connected with mobile agent systems (W. Penczek). On FICS, we could get to know in which logics one has to write long formulas to express properties and in which logics formulas are short (M. Grohe). We could also get to know that we have two different semantics of fixed-point formulas. In one of them formulas must be monotonic, in the other the monotonicity is guaranteed by the definition of the fix-point operator — the next step always includes the result of preceding step (E. Grädel). On WOOD, we could also get to know what is left to be done in the area of types in object-oriented languages. The issues concerning concurrent object synchronization were also discussed on WOOD (V. Sassone). RSKD was opened by a lecture by Professor Z. Pawlak. He presented the connection between rouch sets and information flow.

Kim O. Bruce

Second Workshop Dinner

The restaurant *Polska Tradycja* is located nearby Łazienkowski Park. Many people arrived before time so that the entrance was not crowded. The number of guests was rising slowly and at some point it was unexpectedly high. Fortunately, the magical forces of the service in the restaurant made it possible for everybody to take his place. After a while or two, everything began to work smothly and properly. The mood was very nice and the dishes delicious. The fish that was served was very tasteful and there were no cats around.

Stefan Banach

The main ETAPS 2003 workshops location is the Faculty of Mathematics, Informatics and Mechanics, Warsaw University. The building of the Faculty is located on the Banacha street. Here is a few words about Banach.

Stefan Banach (1892-1945), a great Polish mathematician, was one of the moving spirits of the Lvov school of mathematics in pre-war Poland. He was largely self-taught in mathematics; his genius was accidentally discovered by Hugo Steinhaus. When World War II began, Banach was President of the Polish Mathematical Society and a full professor of Lvov University. Being on good terms with Soviet mathematicians, he was allowed to hold his chair during the Soviet occupation of Lvov. The German occupation of the city in 1941 resulted in the mass murder of Polish academics. Banach survived, but the only way he could work for a living was by feeding lice with his blood in a German institute where typhoid fever research was conducted. His health undercut during the occupation, Banach died before he could be repatriated from Lvov, which was incorporated into the Soviet Union, to Poland after the war.

Théorie des opérations linéaires (*Theory of Linear Operations*, 1932) is regarded as Banach's most influential work. He also initiated and edited the Studia Mathematica series.

Banach was the founder of functional analysis; he also made important contributions to the theory of vector spaces, measure theory, set theory and other branches of mathematics. Here are a few notions which are due to Banach — Banach space, Banach algebra, Banach-Tarski paradox, Hahn-Banach theorem.

(Based on Wikipedia `http://www.wikipedia.org/`.)

An anecdote on Banacha street

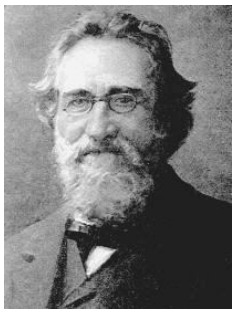
Many, many years ago in 70's or even 60's, a few mathematicians from the Western Europe came to Warsaw on some occasion. They spotted on a Warsaw map a street named after Stefan Banach. As they were mathematicians, they must have visited the street. They got into a tram which went to the surroundings of the street. Those times the street did not look as nowadays. Only long meadows surrounded a pretty narrow way. The mathematicians stood astound for a while, and then concluded that the street looked really like a Banach space.

Ilya Mechnikov

The Faculty of Biology is located at the Miecznikowa street. It is named after the Russian biologist Ilya Mechnikov.

Ilya Mechnikov (1845-1916) was a Russian biologist and Nobel laureate (also named Elie Metchnikoff), a founder of the science of immunity.

Born in Kharkiv Oblast (now Ukraine) on May 15, 1845. Educated at the University of Kharkiv and, in Germany, at the Universities of Giessen, Gottingen, and Munich. In 1904 became a subdirector of the Pasteur Institute in Paris.



Began his career with studies of the process of intracellular digestion in invertebrates. Later established the destructive effect of certain white blood cells, which he called phagocytes, on harmful materials in the bloodstream. In 1884 announced a theory of phagocytosis, which formed a basis for the theory of immunity. Also advocated consumption of lactic acid bacteria for the prevention and remedy of intestinal putrefaction. He also took part in research on now famous *bacillus anthracis* which is more commonly called *anthrax*.

For his research on immunity shared the 1908 Nobel Prize in physiology or medicine with the German bacteriologist Paul Ehrlich.

Lectured in zoology and comparative anatomy at the University of Odessa from 1870 to 1882. At the times of the Russian revolution he escaped to Paris and joined Luis Pasteur.

(Based on Odessa Globe `http://www.odessaglobe.com/`.)

Luis Pasteur

The Heavy Ion Laboratory is located at Pasteura street which is named after the French chemist and biologist Pasteur. The Faculty of Chemistry, Warsaw University is at the Pasteura street. The Nencki Institute of Experimental Biology is also located at the street.

Louis Pasteur (1822-1895) was born in Dole, in the region of Jura, France. His discovery that most infectious diseases are caused by germs, known as the "germ theory of disease", is one of the most important in medical history. His work became the foundation for the science of microbiology, and a cornerstone of modern medicine.

Pasteur's phenomenal contributions to microbiology and medicine can be summarized as follows. First, he championed changes in hospital practices to minimize the spread of disease by microbes. Second, he discovered that weakened forms of a microbe could be used as an immunization against more virulent forms of the microbe. Third, Pasteur found that rabies was transmitted by agents so small they could not be seen under a microscope, thus revealing the world of

viruses. As a result he developed techniques to vaccinate dogs against rabies, and to treat humans bitten by rabid dogs. And fourth, Pasteur developed "pasteurization", a process by which harmful microbes in perishable food products are destroyed using heat, without destroying the food.

(Based on materials from French embassy in Canada `http://ambafrance-ca.org/`.)

Weather forecast

Today The temperatures will reach 14^oC. We can expect more clouds. The pressure will rise from 1026 hPa to 1030 hPa. The sky may get overcast in the afternoon.

ETAPS bus

The ETAPS bus departures for the next year's ETAPS in Barcelona. See you there!

Program information

During breaks, ETAPS team will be glad to help you arrange projectors for your talks.

First Morning Session

FICS 9.30–10.30 — *Faculty of Mathematics, 2180*

• *Invited lecture: Hierarchies in μ-Calculus*, Damian Niwiński

RSKD 9.00–10.30 — *Faculty of Mathematics, 5440*

Chair: Patrick Doherty

• *A Comparison of Three Strategies to Rule Induction from Data with Numerical Attributes*, Jerzy W. Grzymała-Busse
• *'Computing with words' Concept Applied to Musical Information Retrieval*, Bożena Kostek
• *Rough Set Based Automatic Classification of Musical Instrument Sounds*, Alicja A. Wieczorkowska, Andrzej Czyżewski

TACoS 9.00–11.00 — *Faculty of Mathematics, 4420*

Chair: Mauro Pezzè

• *CompositionaQl Generation of MC/DC Integration Test Suites*, Alexander Pretschner
• *Performing Integrated System Tests Using Malicious Component Insertion*, Charalampos Patrikakis, Thomas Kalamaris and Vaios Kakavas
• *Built-In Contract Testing in Component Integration Testing*, Hans-Gerhard Gross and Nikolas F. Mayer
• *Towards Model-Driven Testing*, Reiko Heckel and Marc Lohmann
• *Integration of "Components" to Test Software Components*, Antonia Bertolino, Eda Marchetti and Andrea Polini
• *A Fault Taxonomy for Component-Based Software*, Leonardo Mariani
• *Discussion*

Second Morning Session

FICS 11.00–12.30 — *Faculty of Mathematics, 2180*

• *Monadic Fusion of Functional Programs*, C. Jürgensen

RSKD 11.00–12.30 — *Faculty of Mathematics, 5440*

Chair: Gianpiero Cattaneo

• *Rule Induction with Grouping Target Concepts based on Rough Sets*, Shusaku Tsumoto
• *Introduction and Elucidation of the Quality of Sagacity in the Extended Variable Precision Rough Sets Model*, Malcolm J. Beynon
• *Granular Reasoning Using Zooming In and Out*, Tetsuya Murai, Yoshiharu Sato, Germano Resconi, Michinori Nakata
• *Information Granules for Intelligent Knowledge Structure*, Patrick Doherty, Witold Łukaszewicz, Andrzej Szałas

TACoS 11.15–13.00 — *Faculty of Mathematics, 4420*

Chair: Paolo Prinetto

• *Modelling and Validating a Multiple-Configuration Railway Signalling System Using SDL*, Alessandro Fantechi and Emilio Spinicci
• *Grid Infrastructure Monitoring Service Framework Jiro/JMX Based Implementation*, Bartosz Ławniczek, Grzegorz Majka, Paweł Słowikowski, Krzysztof Zieliński and Sławomir Zieliński
• *Self-Test Components for Highly Reconfigurable Systems*, Giovanni Denaro, Leonardo Mariani and Mauro Pezzè
• *Towards Testing Product Line Architectures*, H. Muccini and A. van der Hoek
• *Discussion*

First Afternoon Session

RSKD 14.00–16.00 — *Faculty of Mathematics, 5440*

Chair: Tetsuya Murai

• *Algebraic Structures of Rough Sets in Representative Approximation Spaces*, Zbigniew Bonikowski
• *Evidence Theory and VPRS model*, Barbara Marszał-Paszek, Piotr Paszek
• *Attribute Reduction in the Bayesian Version of Variable Precision Rough Set Model*, Dominik Ślęzak, Wojciech Ziarko
• *Neural Network Architecture for Synthesis of the Probabilistic Rule Based Classifiers*, Dominik Ślęzak, Jakub Wróblewski, Marcin Szczuka

TACoS 14.00–15.50 — *Faculty of Mathematics, 4420*

Chair: Alessandro Fantechi

• *A Safety Mechanism Using Software Patterns*, Hiromi Kobayashi and Kiyohito Itoh
• *A Dual Language Approach Extension to UML for the Development of Time-Critical Component-Based Systems*, Luigi Lavazza, Sandro Morasca, and Angelo Morzenti
• *A Framework for Composing Real-Time Schedulers*, Giuseppe Lipari, Enrico Bini, and Gerhard Fohler
• *Model Driven Performance Analysis of Enterprise Information Systems*, James Skene and Wolfgang Emmerich
• *Modeling and Analysis of Non-Functional Properties in Component-Based Systems*, Antonia Bertolino and Raffaela Mirandola
• *Discussion*

Second Afternoon Session

RSKD 16.30–18.00 — *Faculty of Mathematics, 5440*

Chair: Lech Polkowski

• *On the Decision Table with Maximal Number of Reducts*, Hung Son Nguyen
• *Rough Set Approach to Pattern Extraction from Classifiers*, Jan Bazan, James F. Peters, Andrzej Skowron, Nguyen Hung Son, Marcin Szczuka
• *Foundations of Vagueness: a Category-theoretic Approach*, Mohua Banerjee, Department of Mathematics, Mihir K. Chakraborty
• *A Method for Extracting Rules from Incomplete Information System*, Yidong Lan, Lin Zhang, Liancheng Liu

TACoS 16.00–17.30 — *Faculty of Mathematics, 4420*

Chair: Sandro Morasca

• *A Framework for Selecting Components Automatically: A First Approach*, Ismael Rodríguez and Fernando Rubio
• *Safe Composition of Linda-Based Components*, Ana M. Roldán, Ernesto Pimentel, and Antonio Brogi
• *UML Modeling for Regression Testing of Component Based Systems*, A. S. M. Sajeev and Bugi Wibowo
• *Design for Testability for Highly Reconfigurable Component-Based Systems*, Andrea Baldini, Paolo Prinetto, Giovanni Denaro and Mauro Pezzè
• *Discussion*