

# THE 18<sup>th</sup> ACM SYMPOSIUM ON APPLIED COMPUTING

By Ronaldo Menezes, Vice-Chair of ACM SAC 2003

The ACM symposium on applied computing (SAC) is organized yearly having the Special Interest Group on Applied Computing (SIGAPP) as the sole sponsor. Since its 1999 edition, the symposium has been alternated between USA and Europe, every year attracting a large number of submissions and attendees.

The 18<sup>th</sup> edition of the symposium was held in Melbourne, Florida from the 9<sup>th</sup> to the 12<sup>th</sup> of March, hosted by the Department of Computer Sciences at the Florida Institute of Technology.



This year's officials were: Gary Lamont (Symposium Chair), Ronaldo Menezes (Symposium Vice-Chair), George Papadopoulos (Program Chair), Hisham Haddad (Program Chair and Treasurer), Brajendra Panda (Publication Chair), Jan Carroll (Director), Warren Jones (Bioinformatics Director), William Shoaff (Local Arrangements Chair) and Ryan Stansifer (Tutorials Chair).

## I. TUTORIALS

In its current format, tutorial sessions are held on Sunday while the technical sessions are Monday through Wednesday. The call four tutorials attracted 18 high level proposals from which only 4 could be selected. The format chosen was to offer 4 half-day tutorials. Given the proposals submitted and the interest of the local industry, the symposium accepted two tutorials in Wireless Networks, forming a full day theme on Wireless. The other two tutorials were

on Semantic Web and on Complex Event Processing. Tutorials took place at the campus of the Florida Institute of Technology.



*a) Wireless/Mobile Network Security by Dr. S. R. Subramanya from the University of Missouri-Rolla:* The tutorial gave an overview of: (i) the principles and practices of various aspects of traditional network security, (ii) the issues in mobile and wireless security, and (iii) techniques and applications of mobile and wireless security.

*b) Resource and Mobility Management in Next Generation Wireless Systems by Dr. Sajal K. Das from the University of Texas at Arlington:* The tutorial aimed at bringing out the research and technological challenges in the resource and mobility management in next generation heterogeneous wireless systems. It also provided some emerging solutions for this problem to support wireless data networking.

*c) Semantic Web and Ontologies by Raphael Volz from the University of Karlsruhe:* In this tutorial, the author motivated the building and driving of ontology-based Semantic Web applications. He described Semantic Web standards as well as mechanisms to represent, engineer and use ontologies in Semantic Web applications. The tutorial was divided into four main parts: technological foundations, ontology representation, ontology engineering, and Semantic Web applications. This was a very popular tutorial attracting the interest of the majority of the symposium registered

tutorial attendees.

*d) Complex Event Processing in Distributed Enterprise Systems by Prof. David Luckham from Stanford University:* Prof. Luckham has held faculty and invited faculty positions in mathematics, computer science and electrical engineering at eight major universities in Europe and the United States. He was one of the founders of Rational Software Inc. in 1981. His tutorial covered the basic concepts of Complex Event Programming: (i) the need for new technologies to manage the electronic enterprise, (ii) basic events and complex events, (iii) relationships of time, causality, independence and aggregation between events, (iv) hierarchical structure in enterprises and how to precisely define corresponding complex event hierarchies, (v) event pattern languages and rules, (vi) applying event hierarchies to enterprise management.

## II. KEYNOTE ADDRESSES

One of the strengths of SAC is the ability to attract applied researchers from diverse areas. This year's keynote addresses is a clear example of this diversity. Following the successful format used in early editions of the symposium, SAC'03 included 2 keynote addresses and 1 luncheon speaker. On Monday, Dr. Lawrence Hunter presented his keynote address entitled *The Era of Biognostic Machinery*. In his talk he argued that knowledge-based approaches, ranging from graphical statistical models with informative priors, to rule-based inference and knowledge-based information extraction from natural language are the best way to meet the challenges faced by the need of analyzing and interpreting increasing amounts of data generated by molecular instrumentation. Dr. Hunger was invited by the former Special Interest Group on Biomedical Computing (SIGBIO). SIGBIO used to be a co-sponsor of SAC and in the

last couple of years have contributed to the symposium by sponsoring a keynote speaker.

Another very interesting keynote, that helped to solidify SAC's relation to industry, was given by Dr. Richard Simonian, Vice President of Engineering for the Government Communication Systems Division of Harris Corporation in Melbourne, Florida. In his talk he tackled the important and controversial problem of bridging research and industry, and the meaning of the software engineering profession. He discussed how fundamental system architecture principles are helpful to drive meaningful research and development and how to apply processes for development both "in the small" and "in the large".

The luncheon speaker was Dr. Lee Weng, Director of Applied Research of Rosetta Biosoftware, a division of Rosetta Inpharmatics LLC. In his talk, he discussed the challenges the industry is facing in providing powerful analysis and data management tools that can be used to revolutionize the field of computational biology.

### III. THE TECHNICAL SESSIONS

The symposium is divided into technical tracks. This year's edition counted with 21 tracks carefully selected from 30 track proposals. The subjects ranged from Applications to Healthcare to Com-

puter Security, from Agents to Web Applications (see Fig. 1). Across all the tracks, the symposium received 525 papers from which only 194 were published. The Data Mining track alone (the largest track in the symposium) received an excess of 60 papers submitted. These numbers reflect a 37% acceptance rate making SAC 2003 not only the most successful edition of SAC so far, but also one of the most popular and competitive conferences in the international field of applied computing

Besides the growth in the number of submissions, we can notice that there are a number of authors that have presented their work at SAC for several years. This demonstrates a singular aspect of the symposium, that presenters enjoy the experience and organization of the symposium and are eager to attend in future years.

### IV. NEXT EDITION

In 2004, SAC will take place in the beautiful island of Cyprus. Following the success of the last few years, we believe SAC will continue to grow and continue to attract high quality works from all over the world. The call for papers for 2004 as well as the call for track proposals are already available.



A few new people will be joining the organization of the SAC which warrants the input of fresh new ideas.

### V. CONTACT INFORMATION

More information about SAC 2004 can be found at [www.acm.org/conferences/sac/sac2004/](http://www.acm.org/conferences/sac/sac2004/)

For information about the Department of Computer Sciences at the Florida Institute of Technology, go to [cs.fit.edu](http://cs.fit.edu).

For information about the University of Cyprus, go to [www.ucy.ac.cy](http://www.ucy.ac.cy).

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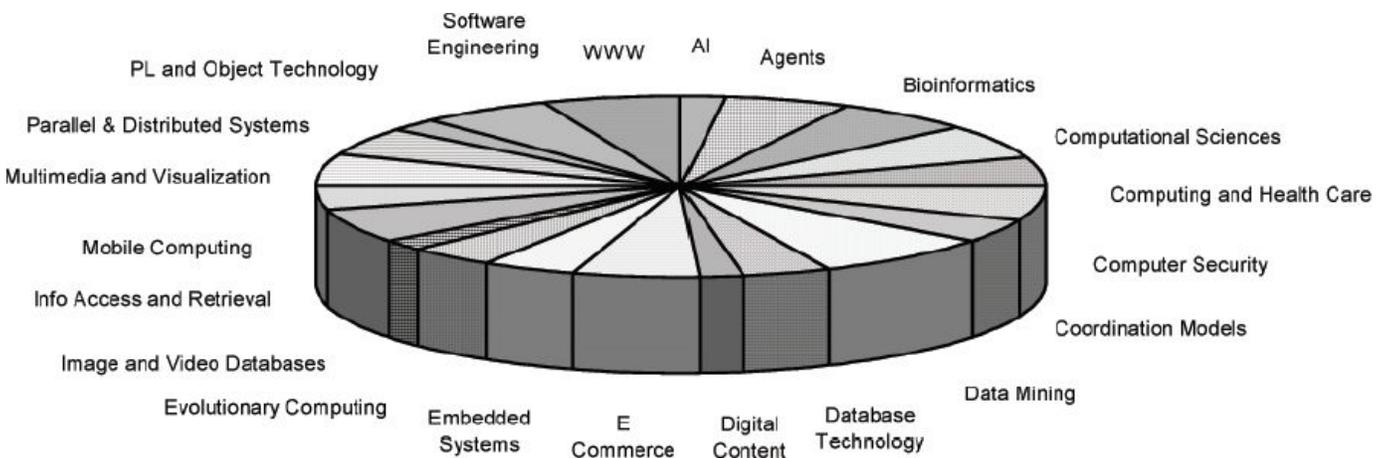


Fig. 1. Subjects of papers accepted by SAC 2003