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Advances in Computer Science -ASIAN 2006

Secure Software and Related Issues

11th Asian Computing Science Conference Tokyo, Japan, December 6-8, 2006 Revised Selected Papers



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Gilles Kahn: A Humble Tribute

Gilles Kahn was one of the visionary leaders whose accomplishments will be remembered for generations. In fact, the ASIAN series of conferences owes a great deal to him. He saw long ago the need to harness Southeast Asia for the next generation. He kindly accepted to be on our Steering Committee and indeed took personal interest and physically participated in the 1995 and 2002 conferences. His sharp criticisms, suggestions and support helped nurture the ASIAN conference from its birth.

Two of his distinct fundamental contributions in computer science that have had a big impact are: natural semantics and a framework for distributed asynchronous computation (often referred to as Kahn's networks of processes). The first one provides a theory that allows computation of properties of programs. This has had a big impact on the development of programming environments from specifications. The latter has had tremendous impact on the specification of asynchronous computation and contributed in many ways to early UNIX development and to formal theories of concurrent processes including communicating sequential processes. Not only did he pioneer the foundational area of computer science or formal methods through his personal contributions, but he also enriched his involvement in the measures of commissioning reliable software for space rocket missions.

He was one of the early members of IRIA (INRIA's name then) and the architect of the INRIA Sophia Antipolis Center. His leadership vision can be seen in the way INRIA has grown in the areas of science and technology, industry cooperations and international relations.

Above all he was always a simple, accessible, charismatic person who was easy to talk to. The ASIAN series owes its growth to his support. It was a great privilege for us to have an opportunity to learn from his visionary leadership through this series of conferences.

> Asian Computing Science Conference Steering Committee

Preface

The series of annual Asian Computing Science Conferences (ASIAN) was initiated in 1995 by AIT, INRIA and UNU/IIST to provide a forum for researchers in computer science from the Asian region and to promote interaction with researchers from other regions. The first ten conferences were held, respectively, in Bangkok, Singapore, Katmandu, Manila, Phuket, Penang, Hanoi, Mumbai, Chiang Mai, and Kunming. The 11th ASIAN conference was held in Tokyo, Japan, December 6-8, 2006. Each year, the conference focuses on a different theme at the cutting edge of computer science research. The theme of ASIAN 2006 was secure software. Three distinguished speakers were invited to the conference:

- Li Gong (Windows Live China, Microsoft Corporation, China)
- John Mitchell (Stanford University, USA)
- Patrick Cousot (Ecole Normale Supérieure-Paris, France)

We had 115 submission papers. The Program Committee reviewed all the papers carefully and then selected 17 regular papers and 10 short papers. After the conference, 1 invited paper, 17 regular papers and 8 short papers were selected for this post-conference formal proceedings volume. We wish to thank the Program Committee members and the external referees for their work in selecting the contributed papers. The conference was sponsored by the National Institute of Informatics, the Embassy of France in Japan, INRIA, and Keio University. We thank the Steering Committee for inviting us to organize the 11th ASIAN conference in Japan. Finally, many thanks to S. Nakajima and his Local Organizing Committee, for their sustained efforts in the organization of the conference.

March 2007

Mitsuhiro Okada Ichiro Satoh

Organization

ASIAN 2006 was sponsored by the National Institute of Informatics, the Embassy of France in Japan, INRIA, and Keio University.

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