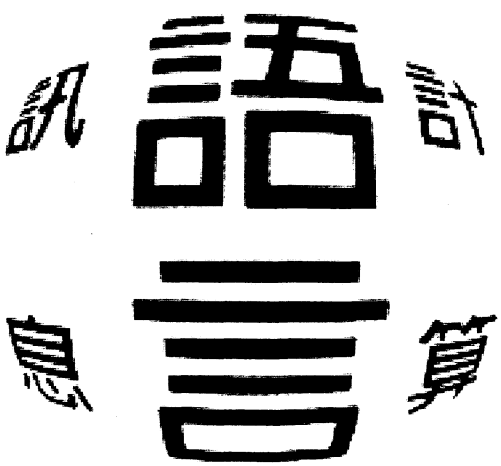
PACLIC 17

Language, Information and Computation



1-3 October, 2003
Sentosa, Singapore

Edited by
Dong Hong Ji and Kim Teng Lua

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Proceedings of 17th Pacific Asia Conference

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Edited by
Dong Hong Ji and Kim Teng Lua

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Welcome Message from Local Chair, Dr Lua Kim Teng

Dear Friends and Colleagues,

A very warm welcome to the beautiful Sentosa Resort Island of Singapore!

The O-COCOSDA2003 and PACLIC17 are major events in the Asian natural language research arena. This is the seventh in the series of O-COCOSDA or Oriental International Coordinating Committee on Speech Databases and Speech I/O System Assessment and the seventeenth PACLIC or Pacific Asia Conference on Language, Information and Computation. We are very honor that Singapore is chosen to be the venue to host both meetings and colips is the organizer.

COCOSDA is an international workshop held annually by the oriental chapter of The International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques for Speech Input/Output. The first meeting was held in Hong Kong and then the past five conferences were held in Japan, Taiwan, China Mainland, Korea and Thailand. After the Singapore meeting, I understand that the next meeting, O-COCOSDA2004 will be held in New Delhi, India. The meeting will be organized under the leadership of Dr Shyam S. Agrawal, Emeritus Scientist, Central Scientific Instruments, Delhi. I wish that every one of us will support the meeting and make it a success!

The PACLIC series of conference is an annual meeting of scholars in theoretical and computational linguistics from the Pacific Asia region. PACLIC aims to cover all aspects of both theoretical and computational linguistics, including morphology, phonology, syntax, semantics, pragmatics, discourse analysis, typology, corpus linguistics, formal grammar theory, natural language processing, natural language systems and related computer applications.

We find that by holding the two conferences at the same venue side-by-side will allow direct interaction between members of the two communities, the speech and the text and NLP community. Perhaps, this synergy will create sparks that will be most beneficial to both research areas.

We received more than 100 submissions from research in Asia and many other parts of the words for the current joint meetings of O-COCOSDA2003 and PACLIC17. Only about 50% of the papers are selected for oral presentations. From the papers presented in the two volumes of proceedings, you will find that we are working hard to maintain high academic standards for the conferences.

I wish to thank the steering committee members: Dr Shyam Agrawal, Nick Campbell, Qiang Huo, Dawa Idomuso, Shuichi Itahashi, Aijun Li, Lin Shan Lee, Yongju Lee, Yung-Hwan Oh, Virach Sornlertlamyanich, Hsiao-Chuan Wang, Jialu Zhang (above for O-COCOSDA2003), Huang Chu-Ren, Akira Ikeya, Ik-Hwan Lee, Byung-Soo Park, Benjamin T'sou (above are co-chairs for PACLIC17) for their assistance, guidance and

promoting the conferences. I also wish to thank all members of programs committees for reviewing the papers. The two program chairs, Dr Li Haizhou (under the assistance of Dr Zhang Min) and Dr Ji Dong Hong worked particularly hard in preparing the programs and the proceedings and Ms Lua Tse Min for assisting in the final typesetting and preparation of the proceedings. I also wish to thank the council members of colips for their supports and funding of the conferences. The travel grants received by the young researchers come from the colips council and Lee Foundation of Singapore jointly. Lee Foundation has been always very supportive to our academic activities. Last but not least, we also wish to thank staff members of the Sijori Hotel who help organize the conference.

Wish all of you the very best!

By

Lua Kim-Teng, Local Chair, O-COCOSDA2003 and PACLIC17
15-08-2003

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MESSAGE FROM PACLIC 17 & O-COCOSDA 2003 PROGRAM COMMITTEE

It is with great pleasure that we welcome you to Singapore for PACLIC 17 and Oriental COCOSDA 2003. It provides an excellent forum for scientists and engineers from various research areas, including linguistics, natural language processing, and speech processing, etc. to meet and to exchange ideas, to share information and to discuss regional matters on any related research issues.

The call-for-papers this year was met with such enthusiasm that we are able to prepare a technical programme that comprises a large number of high quality papers. For PACLIC 17, we received more than 80 submissions from 13 countries or regions: China, Hong Kong, Taiwan, Japan, Korea, Singapore, Thailand, Vietnam, Mongolia, United states, United Kingdom, France and Australia. For O-COCOSDA, we received over 50 submissions from 9 countries or regions: China, Hong Kong, India, Indonesia, Japan, Korea, Singapore, Thailand and Taiwan. In addition to the 47 papers for PACLIC (36 for oral presentation and 11 for poster) and 39 papers for COCOSDA accepted for presentation, we are honoured to have 4 keynotes speeches given by academic and industrial leaders in the field.

The excellent program offered by PACLIC 17 and Oriental COCOSDA 2003 is a result of the excellent review efforts undertaken by the two program committees and the local organizing committee here in Singapore. We would like to thank the steering committees for their guidance, the program committees for their great reviews, the organizing committees for their hard working and many people who contributed to PACLIC 17 and Oriental COCOSDA 2003 in one way or another. Especially, we would like to thank all the authors who submitted their papers.

On behalf of the program committees, we thank you very much for your tremendous supports in making today's event a success. October is the best to visit Singapore. With the intensive technical program, the open atmosphere and the multi-cultural surroundings, we hope that you can take this excellent opportunity to meet old friends and to make new ones. After SARS, the Lion City is roaring again, we are sure that you will enjoy the city as well as the conference.

Ji Donghong
PACLIC 17 program Committee Chair

LI Haizhou
Oriental COCOSDA Program Committee Chair

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