Language, Information and Computation



Proceedings of The 15th Pacific Asia Conference

Edited by Benjamin K. T'sou, Olivia O.Y. Kwong and Tom B.Y. Lai

PRACLUVC 1155

Language Information Sciences Research Centre City University of Hong Kong

Language, Information and Computation

Proceedings of The 15th Pacific Asia Conference

1-3 February 2001, Hong Kong

Edited by Benjamin K. T'sou, Olivia O.Y. Kwong and Tom B.Y. Lai

Language Information Sciences Research Centre City University of Hong Kong Hong Kong

©2001 City University of Hong Kong

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

ISBN 962-442-184-6

Published by City University of Hong Kong

For the Language Information Sciences Research Centre City University of Hong Kong Tat Chee Avenue Kowloon Hong Kong

.

Foreword

By having Hong Kong as its venue after Japan in 2000, the Pacific Asia Conference on Language, Information and Computation (PACLIC 15) has shown itself to be well on its second cycle of rotation among organizers, following the 1994 amalgamation of the Asian Conference on Language, Information and Computation (ACLIC) and the Pacific Asia Conference on Formal and Computational Linguistics (PACFoCoL). Moreover, even though PACLIC 15 is held less than six months after the 38th Annual Meeting of the Association for Computational Linguistics (ACL-2000), held in Hong Kong for the first time, it has nonetheless managed to draw a healthy slate of worthy submissions, thereby demonstrating that Hong Kong has matured as a major base for the field.

The call for extended abstracts for PACLIC 15 drew some 60 enthusiastic responses from Australia, Canada, Denmark, Hong Kong, Japan, Korea, Mainland China, Taiwan, Thailand, and U.S.A. Some authors in fact were able to submit full papers. We took on a double blind review process, and sent out each submission to be reviewed by three assessors. For some papers we were able to invite additional reviewers from outside the program and organizing committees of PACLIC 15. The comments from the assessors were returned to the relevant authors along with the committee's recommendations. This process yielded 24 full papers.

Since both PACLIC 15 and PACLIC 10 came under the same organizers, the occasion invites comparison, especially in terms of the thrusts of papers in both volumes. It is clear that the convergence of numerical methods and discrete approaches as well as parallel developments in the field have yielded fruitful results. This is perhaps best exemplified by the keynote presentation of Professor Charles Fillmore on FrameNet-2, included in this volume. The organizers are particularly gratified that, fresh from getting his honorary doctorate from the University of Chicago, he is all prepared to travel across the Pacific, inspite of discomfort in walking, to personally make the presentation and to support PACLIC.

Acknowledgments

PACLIC 15 has benefited from the contributions of numerous individuals, without whose help the conference would not have been possible. I wish to record my gratitude towards Jae-Woong Choe, Chu-Ren Huang, Akira Ikeya and Kim Teng Lua, co-chairpersons of PACLIC 15, as well as Masahito Kawamori and Jong-Bok Kim, for their advice and support. We are just as grateful to members of the program committee and the invited reviewers. I wish to also thank Prof. C.C. Cheng and the Department of Chinese, Translation and Linguistics, City University of Hong Kong, for becoming a generous sponsor of the conference, and to the Linguistic Society of Hong Kong, the Logico-Linguistic Society of Japan, as well as the Chinese Language Computer Society for co-sponsorship. Additional support for the conference has come by way of CityU Enterprises. Vice-president P.S. Chung and the staff at the Research Office have always given direct and implicit support for our research activities, as has been staff at the Language Information Sciences Research Centre and its subsidiary Corpus Linguistics Laboratory. Our special thanks for support go to Helena Tsang, Eunice Ma, Grace Ko, Francis Chik, Lawrence Cheung, W.F. Tsoi, and Morris Sung. I am no less grateful to Tom Lai who, despite his attachment to Microsoft's China Research Laboratory in Beijing for one semester, has been generous with his time when needed. I should also register my heartfelt gratitude to Olivia Kwong who has provided yeoman service in attending to details of the conference and deserves much of the credit for the excellent turnout at the conference as exemplified by this volume.

Benjamin K. T'sou Chair, Organizing Committee

Organizing Committee

Chair:	Benjamin T'sou, City University of Hong Kong, Hong Kong
Co-Chairs:	Jae-Woong Choe, Korea University, Seoul
	Chu-Ren Huang, Academia Sinica, Taipei
	Akira Ikeya, Toyo Gakuen University, Tokyo
	Kim Teng Lua, National University of Singapore, Singapore
Secretary:	Olivia Kwong, City University of Hong Kong, Hong Kong
Members:	Suk-Jin Chang, Seoul National University, Seoul
	Yong-Beom Kim, Kwangwoon University, Seoul
	Tom Lai, City University of Hong Kong, Hong Kong
	Byung-Soo Park, Kyung Hee University, Seoul
	Kam-Fai Wong, Chinese University of Hong Kong, Hong Kong

Program Committee

Chair: Secretary: Members: Benjamin T'sou, City University of Hong Kong, Hong Kong Olivia Kwong, City University of Hong Kong, Hong Kong Samuel Chan, Chinese University of Hong Kong, Hong Kong Jason Chang, Tsing Hua University, Hsinchu Jing-Shin Chang, Chi Nan University, Nantou Chin-Chuan Cheng, City University of Hong Kong, Hong Kong Yasunari Harada, Waseda University, Tokyo One-soon Her, Chengchi University, Taipei Kiyoshi Ishikawa, Hosei University, Tokyo Makoto Kanazawa, Tokyo University, Tokyo Masahito Kawamori, NTT Research Laboratories, Tokyo Sue-jin Ker, Soochow University, Taipei Jong-Bok Kim, Kyung Hee University, Seoul Tom Lai, City University of Hong Kong, Hong Kong Chungmin Lee, Seoul National University, Seoul Ik-Hwan Lee, Yonsei University, Seoul Kiyong Lee, Korea University, Seoul Minhaeng Lee, Yonsei University, Seoul Robert Luk, Hong Kong Polytechnic University, Hong Kong Yuji Matsumoto, Nara Institute of Science and Technology, Nara Peter Sells, Stanford University, Stanford Hsue-hueh Shih, Sun Yat-sen University, Kaohsiung Maosong Sun, Tsinghua University, Beijing Shu-Chuan Tseng, Academia Sinica, Taipei Kam-Fai Wong, Chinese University of Hong Kong, Hong Kong Chung-hsien Wu, Cheng Kung University, Tainan Jie Xu, National University of Singapore, Singapore

Additional Reviewers

Charles J. Fillmore, University of California, Berkeley Thomas Lee, City University of Hong Kong, Hong Kong Wenjie Li, Chinese University of Hong Kong, Hong Kong

Table of Contents

Forewordi
Acknowledgmentsii
Organizing Committee, Program Committee, Additional Reviewersiii
Conference Programiv
Introduction1
Building a Large Lexical Databank Which Provides Deep Semantics
Charles J. Fillmore, Charles Wooters and Collin F. Baker
A Comparative Study of English and Chinese Synonym Pairs: An Approach based on The Module-Attribute Representation of Verbal Semantics
Kathleen Ahrens and Chu-Ren Huang
Inferring Semantics from Collocation Clusters to Represent Verbs and Nouns
Bowen Hui
A Parallel Interpretation of Floated Quantifiers and Adverbials
Masahiro Kobayashi and Kei Yoshimoto45
What else to quantify?
Michiyuki Sato
Asymmetry, Zero Morphology and Tractability
Anna Maria Di Sciullo and Sandiway Fong61
Emphatic Particles and their Scopal Interactions in Japanese
Akira Ishikawa
Japanese Negative Polarity Items and Negative Concord
Masahito Kawamori and Akira Ikeya85
Towards a Conceptual Representation of Lexical Meaning in WordNet
Jen-nan Chen and Sue J. Ker97
Forming an Integrated Lexical Resource for Word Sense Disambiguation
Oi Yee Kwong 109
Some Principles of Automated Natural Language Information Extraction
Gregers Koch121

A Structure-Shared Trie Compression Method Thanasan Tanhermhong, Thanaruk Theeramunkong and Wirat Chinnan
Processing Local Coherence of Discourse in Centering Theory Jianhua Hu and Haihua Pan139
Temporal Structure on Discourse Level within the Controlled Information Packaging Theory Ik-Hwan Lee and Minhaeng Lee
Highlighting Utterances in Chinese Spoken Discourse Shu-Chuan Tseng
A Decidable Linear Logic for Speech Translation Tsutomu Fujinami
Building domain-independent text generation system XinYu Deng, Sadao Kurohashi and Jun-ichi Nakamura
Vowel Shortening and Surface Ternary Feet: Ternary Rhythm Through Strictly Binary Footing Seiichiro Inaba
Mappings From the Source Domain of Plant in Mandarin Chinese Vicky Tzuyin Lai and Kathleen Ahrens
Floating Quantifiers and Lexical Specification of Quantifier Retrieval Eun-Jung Yoo
Pragmatic Inference with Conditionals and Concessives in Japanese Yasunari Harada and Kumiko Honda
On the Semantics of Japanese Particles wa and mo and Their Interaction with Quantifiers Ryoya Okabe
Nominal Markers and Word Order in Korean Sae-Youn Cho and Jong-Joo Choe
Thai Classifiers and the Structure of Complex Thai Nominals Pornsiri Singhapreecha
Negation, VP Ellipsis, and VP Fronting in English: A Construction-HPSG Analysis Jong-Bok Kim
Feature Percolation, Movement and Cross-Linguistic Variation in Pied-Piping Jeong-Me Yoon 283

Gerundive Complements in English: A Constraint-Based Analysis Byung-Soo Park	93
An HPSG Account of the Hierarchical Clause Formation in Japanese: HPSG-Based	
Japanese Grammar for Practical Parsing	
Takashi Miyata, Akira Ohtani and Yuji Matsumoto30	05
The Japanese Internally-Headed Relative Clause as a Marked Head-Complement Structure	
Chiharu Uda Kikuta	17
Distributional Properties and Endocentricity of English Gerunds	
Yong-Beom Kim	25
Robust N-gram Based Syntactic Analysis Using Segmentation Words	
Nobuo Inui and Yoshiyuki Kotani	33
Recursive Top-down Fuzzy Match: New Perspectives on Memory-based Parsing	
Oliver Streiter	45
Author Index	57