

**Proceedings of the
24th Pacific Asia Conference on
Language, Information and Computation**

**Edited by Ryo Otoguro, Kiyoshi Ishikawa, Hiroshi Umemoto,
Kei Yoshimoto and Yasunari Harada**

**4 – 7 November 2010
Tohoku University**

**© 2010 The PACLIC 24 Organizing Committee
and PACLIC Steering Committee**

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

Copyright of contributed papers reserved by respective authors

ISBN 978-4-905166-00-9

Published by Institute for Digital Enhancement of Cognitive Development,
Waseda University

Acknowledgments

PACLIC 24 is hosted by the Center for the Advancement of Higher Education, Tohoku University in conjunction with The Logico-Linguistic Society of Japan and supported by JSPS International Scientific Meetings in Japan and Research Center for Language, Brain and Cognition, Graduate School of International Cultural Studies, Tohoku University

Symposium: Linguistics of 'Ba' on Day 2: November 6th (Sat) is supported in part and organized in conjunction with JSPS Kakenhi, or Grant-inAid for Challenging Exploratory Research Number 21652041, entitled Construction of Linguistics of 'Ba', Semantics and Pragmatics of 'Ba'.

Foreword

Welcome to the beautiful city of Sendai and to PACLIC 24. Tohoku University thank you for your participation, the Logico-Linguistic Society of Japan thank you for your contribution, and I thank you for coming to join us.

We are gathered here for the 24th Pacific Asia Conference on Language, Information and Computation, to be held for the first time in Sendai. To our call for papers distributed earlier this year, we received a total of 102 submissions, out of which 28 are selected for oral presentations, 25 for poster presentations and 20 for the student session. This year, we witnessed a sudden increase of submissions from South Asia and on languages in the region, augmenting diversity of languages discussed and countries and regions of participants. With increasing number of submissions, we are no longer able to follow our earlier PACLIC tradition to organize the program into one series of single sessions, but we still hope to keep our spirit in which researchers in theoretical and computational linguistics from diverse research backgrounds on various issues of different languages gather together, share results and go home with fresh ideas and new friendships. Following the practice of PACLIC 23 held in 2009 at the City University of Hong Kong, we set up multiple sessions to accommodate more oral presentations, but the two invited open symposia and three plenary talks do not have counterpart parallel sessions. We have two pre-workshops, one on corpus and the other on meaning, on Day 0, which is Thursday November 4th, and on Day 3, which is Sunday November 7th, we have a special workshop, proposed and organized by Dr. Chungmin Lee, in honor of Professor Akira Ikeya, who is one of the “founding fathers” of this PACLIC series of conferences.

We introduced two new “innovations” in our program: the two organized symposia on Day 1 and Day 2 are open to the general public, namely general audience who are not registered for PACLIC 24 can attend the presentations for free. Another new attempt is to set up a Student Session and Student Awards. The session is for graduate students and authors of several best papers are awarded partial travel expense support. The former is intended to attract more audience, mostly from within Japan and especially from the area around the hosting institution, and the latter to motivate increased interests in submission, especially from students outside Japan.

All these new attempts were possible by the dedicated efforts by our Organizing Chair, Professor Kei Yoshimoto, Program Chair, Ryo Otaguro, and other members of both the Organizing and Program Committees and additional reviewers, with financial support from the Japan Society for the Promotion of Science and Tohoku University.

Now, please enjoy the presentations, get connected and get ready to start a new collaboration!

October, 2010
Yasunari Harada
Honorary Program Chair of PACLIC 24
President of the Logico-Linguistic Society of Japan

Organizers

Steering Committee

Jae-Woong Choe, Korea University
Yasunari Harada, Waseda University
Chu-Ren Huang, Hong Kong Polytechnic University
Kim Teng Lua, Chinese and Oriental Languages Information Processing Society
Rachel Edita Roxas, De La Salle University-Manila
Maosong Sun, Tsinghua University
Benjamin T'sou, The Hong Kong Institute of Education

Program Committee

Chairs

Ryo Otoguro, Waseda University
Kiyoshi Ishikawa, Hosei University
Hiroshi Umemoto, Fuji Xerox Co.
Yasunari Harada, Waseda University (Honorary Program Chair)

Co-Chairs

Olivia Kwong, City University of Hong Kong
Shu-Kai Hsieh, National Taiwan Normal University
Donghong Ji, Wuhan University
Yae-Sheik Lee, Kyungpook National University
Min Zhang, Institute for Infocomm Research
Rachel Edita Roxas, De La Salle University-Manila

Members

Doug Arnold, University of Essex
Wirote Aroonmanakun, Chulalongkorn University
Timothy Baldwin, University of Melbourne
Ma. Lourdes Bautista, De La Salle University
Francis Bond, Nanyang Technological University
Hee-Rahk Chae, Hankuk University of Foreign Studies
Jae-Woong Choe, Korea University
Jing-Shin Chang, National Chi-Nan University
Eng Siong Chng, Nanyang Technological University
Siaw-Fong Chung, National Chengchi University
Beatrice Daille, University of Nantes

Danilo Dayag, De La Salle University
Shirley Dita, De La Salle University
Alex Fang, City University of Hong Kong
Maria Flouraki, School of Oriental and African Studies, University of London
Guohong Fu, Heilongjiang University
Helena Hong Gao, Nanyang Technological University
Zhao-Ming Gao, National Taiwan University
Josef van Genabith, Dublin City University
Yi Guan, Harbin Institute of Technology
Takao Gunji, Kobe Shoin University
Koji Kawahara, Fuji Women's University
Jong-Bok Kim, Kyung Hee University
Young-Gil Kim, Electronics and Telecommunications Research Institute
Chunyu Kit, City University of Hong Kong
Valia Kordoni, Saarland University
Paul Law, City University of Hong Kong
Chungmin Lee, Seoul National University
Hae-yun Lee, Hankuk University of Foreign Studies
Alessandro Lenci, University of Pisa
Gina-Anne Levow, University of Manchester
Haizhou Li, Institute for Infocomm Research
Qun Liu, Chinese Academy of Sciences
Qin Lu, Hong Kong Polytechnic University
Qing Ma, Ryukoku University
Takafumi Maekawa, Hokusei Gakuen Junior College
Ruli Manurung, University of Indonesia
Michinao Matsui, Osaka Health Science University
Yoshiki Mori, University of Tokyo
Vincent Ng, University of Texas at Dallas
Toshiyuki Ogihara, University of Washington
David Y. Oshima, Nagoya University
Jong C. Park, Korea Advanced Institute of Science and Technology
Prashant Pardeshi, National Institute for Japanese Language and Linguistics
Laurent Prevot, Universite de Provence
Hong-Mwun Pryo, Sunkyunkwan University
Long Qiu, Institute for Infocomm Research
Manabu Sassano, Yahoo Japan Corporation
Sachiko Shudo, Waseda University
Pornsiri Singhapreecha, Thammasat University

Virach Sornlertlamvanich, Thai Computational Linguistics Laboratory, NICT
Andrew Spencer, University of Essex
I-Wen Su, National Taiwan University
Keh-Yih Su, Behavior Design Corporation
Zhifang Sui, Peking University
Le Sun, Chinese Academy of Sciences
Takenobu Tokunaga, Tokyo Institute of Technology
Shu-Chuan Tseng, Academia Sinica
Aline Villavicencio, Federal University of Rio Grande do Sul
Haifeng Wang, Baidu
Houfeng Wang, Peking University
Hui Wang, National University of Singapore
Andy Way, Dublin City University
Kam-Fai Wong, Chinese University of Hong Kong
Jiun-Shiung Wu, National Chiayi University
Fei Xia, University of Washington
Jae Il Yeom, Hongik University
Satoru Yokoyama, Tohoku University
Kei Yoshimoto, Tohoku University
Hao Yu, Fujitsu (China) Research Center
Yujie Zhang, National Institute of Information and Communications Technology
Guo Dong Zhou, Soochow University
Qiang Zhou, Tsinghua University
Jingbo Zhu, Northeastern University
Michael Zock, Laboratoire d'Informatique Fondamentale de Marseille, C.N.R.S.
Chengqing Zong, Chinese Academy of Sciences

Additional Reviewers

Chikara Hashimoto, National Institute of Information and Communication Technology

Masato Ishizaki, University of Tokyo

Reiko Mazuka, RIKEN Brain Science Institute

Yasuhide Miura, Fuji Xerox Co.

Hiroshi Nakagawa, University of Tokyo

Satoshi Sato, Nagoya University

Daigo Sugihara, Fuji Xerox Co.

Motoyuki Takaai, Fuji Xerox Co.

Satoshi Tojo, Japan Advanced Institute of Science and Technology

Masatsugu Tonoike, Fuji Xerox Co.

Local Organizing Committee

Kei Yoshimoto, Tohoku University

Natsue Sugaya, Tohoku University

Satoru Yokoyama, Tohoku University

Shigeru Sato, Juntendo University

Chidori Nakamura, Iwate University

Table of Contents

Foreword.....	iii
Organizers.....	iv

Invited and Plenary Talks

Symposium on Language Resources

<i>PodCastle: A Spoken Document Retrieval Service Improved by Anonymous User Contributions</i> Masataka Goto and Jun Ogata.....	3
<i>The Future Role of Language Resources for Natural Language Parsing (We Won't Be Able to Rely on Pierre Vinken Rorever... or Will We Have to?)</i> Julia Hockenmaier.....	13
<i>The Acquisition of Word Order in a Topic-prominent Language: Corpus Findings and Experimental Investigation</i> Thomas Hun-Tak Lee.....	15

Symposium: Toward a Linguistic Theory of Ba: Semantics and Pragmatics of Ba

<i>How and Why Two Strangers Can Co-create a Story: An Application of the 'Ba'-Theory Based Approach to the Discourse</i> Sachiko Ide.....	19
<i>Situated Language: Case of Japanese</i> Hideyuki Nakashima.....	25
<i>Listening In</i> Stanley Peters.....	31

Plenary Talks

<i>Basic Units of Lexicons and Ontologies: Words, Senses and Concepts</i> Hee-Rahk Chae.....	35
<i>A Morphosyntactic Analysis of the Pronominal System of Philippine Languages</i> Shirley N. Dita.....	45
<i>Statistical Translation Model Based On Source Syntax Structure</i> Qun Liu, Yang Liu and Haitai Mi.....	61

Regular Papers

<i>Lexical Semantics-Syntactic Model for Defining and Subcategorizing Attribute Noun Class</i> Xiaopeng Bai and Hui Wang	65
<i>Benglish Verbs: A Case of Code-mixing in Bengali</i> Shishir Bhattacharja	75
<i>Enhanced Genre Classification through Linguistically Fine-Grained POS Tags</i> Alex Chengyu Fang and Jing Cao	85
<i>Identifying Emotional Expressions, Intensities and Sentence Level Emotion Tags Using a Supervised Framework</i> Dipankar Das and Sivaji Bandyopadhyay	95
<i>Decision Theory and Discourse Particles: A Case Study from a Large Japanese Sentiment Corpus</i> Christopher Davis	105
<i>Finding Appropriate Subset of Votes Per Classifier Using Multiobjective Optimization: Application to Named Entity Recognition</i> Asif Ekbal, Sriparna Saha and Md. Hasanuzzaman	115
<i>Experimental Approach to Reference in Discourse: Working Memory Capacity and Language Comprehension in Russian</i> Olga Fedorova, Ekaterina Delikishkina and Anna Uspenskaya	125
<i>A Computational Model of Language Generation Applied to Japanese Wh-questions</i> Jason Ginsburg	133
<i>Chains in Syntax and Morphology</i> Thomas Gross	143
<i>Feature Subset Selection Using Genetic Algorithm for Named Entity Recognition</i> Md. Hasanuzzaman, Sriparna Saha and Asif Ekbal	153
<i>Developing Punjabi Morphology, Corpus and Lexicon</i> Muhammad Humayoun and Aarne Ranta	163
<i>Effective Use of Linguistic Features for Sentiment Analysis of Korean</i> Hayeon Jang and Hyopil Shin	173
<i>Word Order and NP Structure in Korean: A Constraint Based Approach</i> Jong-Bok Kim, Nam-Guen Lee and Yae-shiek Lee	183
<i>Evidentials and Epistemic Modal in Korean: Evidence from Their Interactions</i> Chungmin Lee	193

<i>Implementation of Korean Syllable Structures in the Typed Feature Structure Formalism</i> Gyu-hyung Lee, Ye-seul Park and Yong-hun Lee.....	203
<i>Focus Types and Subject-Object Asymmetry in Korean Case Ellipsis: A New Look at Focus Effects</i> Hanjung Lee and Haejeong Choi	213
<i>eSpatialML: An Event-Driven Spatial Annotation Framework</i> Kiyong Lee, Jonathan Webster and Alex Chengyu Fang	223
<i>Domain-Independent Novel Event Discovery and Semi-Automatic Event Annotation</i> Hao Li, Xiang Li, Heng Ji and Yuval Marton	233
<i>Developing an Online Indonesian Corpora Repository</i> Ruli Manurung, Bayu Distiawan and Desmond Darma Putra	243
<i>Topicalization and Truth Conditions: A Categorical Account</i> Hiroaki Nakamura	251
<i>Unsupervised Classification of Biomedical Abstracts Using Lexical Association</i> Jonathon Read, Jonathan Webster and Alex Chengyu Fang	261
<i>Licensing Nominals in the Multiple Nominative Constructions in Korean: A Mereological Perspective</i> Byong-Rae Ryu	271
<i>Combination of 3 Types of Speech Recognizers for Anaphora Resolution</i> Kazutaka Shimada, Noriko Tanamachi and Tsutomu Endo	281
<i>Syntactic and Semantic Discrepancies among the Verbs for ‘kill’ in English, Chinese and Thai</i> Kingkarn Thepkanjana and Satoshi Uehara	291
<i>Expanding Chinese Sentiment Dictionaries from Large Scale Unlabeled Corpus</i> Hongzhi Xu, Kai Zhao, Likun Qiu and Changjian Hu	301
<i>Representing Events in Japanese Complex Predicates</i> Yoshie Yamamori	311
<i>Fault-Tolerant Learning for Term Extraction</i> Yuhang Yang, Hao Yu, Yao Meng, Yingliang Lu and Yingju Xia	321
<i>Syntactically Complex Demonstratives and Sortal Inherency</i> Richard Zuber	331

Poster Papers

<i>On Automated Hyperonym Hierarchy Construction Using an Internet Search Engine</i> Sergey Afonin.....	341
--	-----

<i>An Ontological Analysis of Japanese and Chinese Kinship Terms</i> Songji Baik and Hee-Rahk Chae	349
<i>GRASP: Grammar- and Syntax-based Pattern-Finder for Collocation and Phrase Learning</i> Mei-hua Chen, Chung-chi Huang, Shih-ting Huang and Jason S. Chang	357
<i>Mitigating Problems in Analogy-based EBMT with SMT and vice versa: A Case Study with Named Entity Transliteration</i> Sandipan Dandapat, Sara Morrissey, Sudip Kumar Naskar and Harold Somers	365
<i>Why the English Easiest Type Became the Hardest in Russian, or Russian Adults' Comprehension of before and after sentences</i> Olga Fedorova	373
<i>Simpler Is Better: Re-evaluation of Default Word Alignment Models in Statistical MT</i> Mark Fishel	381
<i>The TXM Platform: Building Open-Source Textual Analysis Software Compatible with the TEI Encoding Scheme</i> Serge Heiden	389
<i>Using Corpus-based Linguistic Approaches in Sense Prediction Study</i> Jia-Fei Hong, Sue-Jin Ker, Chu-Ren Huang and Kathleen Ahrens	399
<i>Synthetic Compounds in Mandarin</i> Shuang Hong	409
<i>The Specialized Vocabulary of Modern Patent Language: Semantic Associations in Patent Lexis</i> Darren Hsin-hung Lin and Shelley Ching-yu Hsieh	417
<i>The KOLON System: Tools for Ontological Natural Language Processing in Korean</i> Juliano Paiva Junho, Yumi Jo and Hyopil Shin	425
<i>An Approach toward Register Classification of Book Samples in the Balanced Corpus of Contemporary Written Japanese</i> Wakako Kashino and Manabu Okumura	433
<i>A Computational Treatment of Korean Serial Verb Constructions</i> Jong-Bok Kim, Jaehyung Yang and Sanghoun Song	439
<i>A Supervised Machine Learning Approach for Event-Event Relation Identification</i> Anup Kumar Kolya, Asif Ekbal and Sivaji Bandyopadhyay	447
<i>Arguments for Parallel Distributed Parsing: Toward the Integration of Lexical and Sublexical (Semantic) Parsings</i> Kow Kuroda	455

<i>Scrambling of Wh-phrases in Japanese</i> Paul Law	463
<i>A Comparative Study on the Aspectual Classification of Korean and Japanese Verbs in Relation to ‘-ess-’ ‘-essess-’ in Korean and ‘sudeni’ in Japanese</i> Younghee Lee and Byong-Rae Ryu	471
<i>A Modular Architecture for the Wide-Coverage Translation of Natural Language Texts into Predicate Logic Formulas</i> Yusuke Miyao, Alastair Butler, Kei Yoshimoto and Jun’ichi Tsujii	481
<i>Toward a Unified Computational Model of Quantificational Scope Readings</i> Prakash Mondal	489
<i>CCG of Japanese Sentence-final Particles</i> Sumiyo Nishiguchi	497
<i>A Multi-Dimensional Analysis of Japanese Benefactives: The Case of the Yaru-Construction</i> Akira Otani and Mark Steedman	503
<i>Typed Dependency Relations for Syntactic Analysis of Thai Sentences</i> Siripong Potisuk	511
<i>Exploiting a Multilingual Web-based Encyclopedia for Bilingual Terminology Extraction</i> Fatiha Sadat	519
<i>Language Homogeneity in the Japanese Wikipedia</i> Karl-André Skevik	527
<i>Incorporate Credibility into Context for the Best Social Media Answers</i> Qi Su, Helen Kai-yun Chen and Chu-Ren Huang	535

Student Award Papers

<i>A Query Focused Multi Document Automatic Summarization</i> Pinaki Bhaskar and Sivaji Bandyopadhyay	545
<i>Through Low-Cost Annotation to Reliable Parsing Evaluation</i> Marek Grác, Miloš Jakubíček and Vojtěch Kovář	555
<i>A Look into the Acquisition of English Motion Event Conflation by Native Speakers of Chinese and Japanese</i> Ryan Spring	563
<i>Stage/Individual-level Predicates, Topics and Indefinite Subjects</i> Shuiying Yao	573
<i>How Well Conditional Random Fields Can be Used in Novel Term Recognition</i> Xing Zhang, Yan Song and Alex Chengyu Fang	583

Student Papers

<i>Clitics in Arabic Language: A Statistical Study</i> Fahad Alotaiby, Salah Foda and Ibrahim Alkharashi	595
<i>AUTOLEX: An Automatic Lexicon Builder for Minority Languages Using an Open Corpus</i> Evan Liz C. Buhay, Marie Joy P. Evardone, Hansel B. Nocon, Davis Muhajereen D. Dimalen and Rachel Edita O. Roxas	603
<i>Improving Information Extraction Using Knowledge Model</i> Yue Chen	613
<i>Finding Emotion Holder from Bengali Blog Texts: An Unsupervised Syntactic Approach</i> Dipankar Das and Sivaji Bandyopadhyay	621
<i>Terminological Ontology and Cognitive Processes in Translation</i> Fumiko Kano Glückstad	629
<i>Detection of Users Suspected of Pretending to Be Other Users in a Community Site by Using Messages Submitted to Non-Target Categories</i> Naoki Ishikawa, Ryo Nishimura, Yasuhiko Watanabe, Masaki Murata and Yoshihiro Okada	637
<i>Detecting Nasty Comments from BBS Posts</i> Tatsuya Ishisaka and Kazuhide Yamamoto	645
<i>Using Various Features in Machine Learning to Obtain High Levels of Performance for Recognition of Japanese Notational Variants</i> Masahiro Kojima, Masaki Murata, Jun'ichi Kazama, Kow Kuroda, Atsushi Fujita, Eiji Aramaki, Masaaki Tsuchida, Yasuhiko Watanabe and Kentaro Torisawa	653
<i>Korean Kes-Relative Clauses as Stages</i> Sang-Hee Park	661
<i>Finite State Morphology and Sindhi Noun Inflections</i> Mutee U Rahman Muslim and Mohammad Iqbal Bhatti	669
<i>The Acquisition of Imperfective Aspect Marking in Korean as a Second language by Japanese Learners</i> Ju-Yeon Ryu, Kaoru Horie and Yasuhiro Shirai	677
<i>Multi-aspects Review Summarization Based on Identification of Important Opinions and their Similarity</i> Ryosuke Tadano, Kazutaka Shimada and Tsutomu Endo	685
<i>Generation of Summaries that Appropriately and Adequately Express the Contents of Original Documents Using Word-Association Knowledge</i> Kazuki Takigawa, Masaki Murata, Masaaki Tsuchida, Stijn De Saeger, Kazuhide Yamamoto and Kentaro Torisawa	693

<i>Adjectival Modification to Nouns in Mandarin Chinese: Case Studies on “cháng+noun” and “adjective+tú shū gu n”</i> Shan Wang and Chu-Ren Huang	701
<i>Compositional Operations of Mandarin Chinese Perception Verb “kàn”: A Generative Lexicon Approach</i> Shan Wang and Chu-Ren Huang	707

Workshop on Advanced Corpus Solutions

<i>Workshop on Advanced Corpus Solutions</i> Janne Bondi Johannessen	717
<i>Degrees of Orality in Speech-like Corpora: Comparative Annotation of Chat and E-mail Corpora</i> Eckhard Bick	721
<i>Parallel Suffix Arrays for Corpus Exploration</i> Johannes Goller	731
<i>Fast Syntactic Searching in Very Large Corpora for Many Languages</i> Miloš Jakubiček, Adam Kilgarriff, Diana McCarthy and Pavel Rychlý	741
<i>A Multilingual Speech Resource: The Nordic Dialect Corpus</i> Janne Bondi Johannessen, Joel Priestley and Anders Nøklestad	749
<i>Dialect Corpora Taken Further: The DynaSAND Corpus and Its Application in Newer Tools</i> Jan Pieter Kunst and Franca Wesseling	759
<i>Advanced Corpus Solutions for Humanities Researchers</i> James Wilson, Anthony Hartley, Serge Sharoff and Paul Stephenson	769
<i>Entity Coherence in Comparable Learner Corpora: Seeking Pedagogical Insights</i> Mitsuko Yamura-Takei, Miho Fujiwara and Etsuko Yoshida	779

Workshop on Model and Measurement of Meaning (M3)

<i>The Use of a Cultural Protocol for Quantifying Cultural Variations in Verb Semantic between Chinese and French</i> Hintat Cheung, Yann Desalle, Karine Duvignau, Bruno Gaume, Chunhan Chang and Pierre Magistry	791
<i>Towards the Global SentiWordNet</i> Amitava Das and Sivaji Bandyopadhyay	799
<i>Towards an Automatic Measurement of Verbal Lexicon Acquisition: The Case for a Young Children-versus-Adults Classification in French and Mandarin</i> Yann Desalle, Shu-Kai Hsieh, Bruno Gaume and Hintat Cheung	809

<i>Graph Representation of Synonymy and Translation Resources for Crosslinguistic Modelisation of Meaning</i> Benoît Gaillard, Yannick Chudy, Pierre Magistry, Shu-Kai Hsieh and Emmanuel Navarro	819
<i>Exploring Chinese Verbal Lexicon Developmental Trend with Semantic Space</i> Ching-Fen Pan	831
<i>Computational Modeling of Verb Acquisition, from a Monolingual to a Bilingual Study</i> Laurent Prévot, Chun-Han Chang and Yann Desalle	841
<i>Cross-sortal Predication and Polysemy</i> Petr Šimon and Chu-Ren Huang	853
<i>Verb Use in Chinese Children: Extensibility of Instrument</i> Te-Hsin Wu	863

Workshop on Semantics and Logical Flavor: In Honor of Professor Akira Ikeya

<i>Natural Language Production in Database Semantics</i> Roland Hausser	875
<i>Change of Location and Change of State: How Telicity is Attained</i> Chungmin Lee	885
<i>Various Evidentials in Korean</i> Kyung An Song	895
<i>A Note on Pseudo-comparatives like “John is rich like X!” and “Like X, John is rich!”</i> Benjamin T’sou	907

