Proceedings of the 28th Pacific Asia Conference on Language, Information and Computation (PACLIC 28)

Edited by

Wirote Aroonmanakun, Thepchai Supnithi and Prachya Boonkwan

12–14 December 2014 Phuket, Thailand

© The PACLIC 28 Organizing Committee and PACLIC Steering Committee

All rights reserved. Except as otherwise expressly permitted under copyright law, 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 xxxxxx

Published by the Department of Linguistics, Faculty of Arts, Chulalongkorn University.

Acknowledgments

PACLIC 28, the 28th Pacific Asia Conference on Language, Information and Computation, is organized by Department of Linguistics, Chulalongkorn University (CU), Language and Semantic Technology Laboratory, National Electronics and Computer Technology Center (NECTEC), and Sirindhorn International Institute of Technology (SIIT), under the auspices of PACLIC Steering Committee.

We gratefully acknowledge the support from the Chula Global Network, the Division of Research Development and Promotion, and the Research Affairs Division, Faculty of Arts.

Welcome Message

Distinguished scholars and colleagues,

It is my great pleasure and honour to be here today to open the 28th Pacific Asia Conference on Language, Information and Computing which is held in Thailand for the first time.

This year's PACLIC annual meeting maintains the long-standing mission of PACLIC conferences to emphasize the synergy of theoretical analysis and processing of language, and to serve as a venue for scholars working on issues pertaining to different languages in the Pacific-Asia region to share their findings and experiences. It provides wonderful opportunities for participants to build a strong academic network, be enlightened by new insights, get entertained intellectually, and return home ready to initiate new significant contribution.

For the past years since its establishment, the PACLIC conferences have gained more and more interests and participations from linguistic researchers, as evidenced by the increasing number of papers and by the wider range of topics. Likewise, the current PACLC conference has received an overwhelming response of 151 papers from 27 countries or regions namely China, Hong Kong, Japan, Republic of Korea, Taiwan, Indonesia, Malaysia, Philippines, Thailand, Vietnam, India, Pakistan, Kazakhstan, Czech Republic, Finland, France, Germany, Ireland, Norway, Romania, Russian Federation, United Kingdom, United States, Egypt, Tunisia, New Zealand and Australia. (78.15% from 13 regions in Asia, 13.24% from 9 regions in Europe, 3.97% from the United States, 2.65% from Africa, 1.33% from New Zealand, and 0.66% from Australia). To ensure that all accepted papers meet the high quality standard of the PACLIC conference, each submission was reviewed by three reviewers. As a result, only approximately 37% of top-notch academic papers were accepted for oral presentations and 13% for poster sessions.

Ladies and gentlemen, the successful conference is the result of tremendous efforts and contributions from several parties. We congratulate the Department of Linguistics, Chulalongkorn University, the National Electronics and Computer Technology Center (NECTEC) and Sirindhorn International Institute of Technology (SIIT) for their collaboration towards this significant achievement. We would like to take this opportunity to thank our keynote and invited speakers, namely Professor Mark Steedman and Professor Bonnie Webber from the University of Edinburgh, Professor Christian Matthiessen from Hong Kong Polytechnic University, Dr.Virach Sornlertlamvanich from the Technology Promotion Association (Thailand-Japan), Professor Jae-Woong Choe from Korea University, and Professor Min Zhang from Soochow University. We are overwhelmed with a sense of gratitude for the presenters and colleagues for donating your valuable time to attend and enrich this conference. We also wish to extend our sincere appreciation to the steering committee for their guidance and to the organizing

team for their essential supports and dedicated works. Last but not least, we remain profoundly grateful to the sponsors: Chula Global Network, the Division of Research Development and Promotion, and the Research Affairs Division, Faculty of Arts.

It is now time to declare the 28th Pacific Asia Conference on Language, Information and Computing open. May this conference succeed in all its aims and may it stimulate broader insights into theoretical and computational linguistics for all participants and related organizations.

Conference Chair and Co-Chair

Wirote Aroonmanakun (Chulalongkorn University)

Thepchai Supnithi (National Electronics and Computer Technology Center)

PACLIC 28 Organizers

Steering Committee: Standing Members (in alphabetic order of surnames)

Hee-Rahk Chae, Hankuk University of Foreign Studies, Seoul Chu-Ren Huang, The Hong Kong Polytechnic University, Hong Kong Rachel Edita O. Roxas, National University, Manila Maosong Sun, Tsinghua University, Beijing Benjamin T'sou, City University of Hong Kong, Hong Kong Kei Yoshimoto, Tohoku University, Sendai Min Zhang, Soochow University, Suzhou

Organizer:

Department of Linguistics, Chulalongkorn University

Co-Organizers:

National Electronics and Computer Technology Center Sirindhorn International Institute of Technology

Program Committee:

Chairs:

Aroonmanakun, Wirote (Chulalongkorn University) Chae, Hee-Rahk (Hankuk University of Foreign Studies, Seoul) Lai, Huei-Ling (National Chengchi University) Supnithi, Thepchai (National Electronics and Computer Technology Center) Yoshimoto, Kei (Tohoku University)

PC Members

Bond, Francis (Nanyang Technological University) Boonkwan, Prachya (National Electronics and Computer Technology Center) Chen, Doris (National Taiwan Normal University)

- Chen, Kuang-Hua (National Taiwan University)
- Chng, Eng-Siong (Nanyang Technological University)
- Chui, Kawai (National Chengchi University, Taiwan)
- Daille, Beatrice (Laboratoire d'Informatique de Nantes Atlantique)
- Dellwo, Volker (University of Zurich)
- Dita, Shirley (De La Salle University-Manila)
- Fang, Alex Chengyu (The City University of Hong Kong)
- Fu, Guohong (Heilongjiang University)
- Gao, Wei (Qatar Computing Research Institute)
- Gao, Helena (Nayang Technological University)
- Harada, Yasunari (Waseda University)
- Haruechaiyasak, Choochart (National Electronics and Computer Technology Center)
- Hayashibe, Yuta (Kyoto University)
- Hong, Munpyo (Sungkyunkwan University)
- Hsieh, Shu-Kai (National Taiwan Normal University)
- Jenks, Peter (UC Berkeley)
- Ji, Donghong (Wuhan University)
- Jiang, Wen Bin (Institute of Computing, CAS)
- Kim, Jong-Bok (Kyung Hee University)
- Kordoni, Valia (Humboldt University Berlin)
- Kosawat, Krit (National Electronics and Computer Technology Center)
- Kwong, Oi Yee (City University of Hong Kong)
- Lai, Bong Yeung Tom (City University of Hong Kong)
- Law, Paul (City University of Hong Kong)
- Levow, Gina-Anne (University of Washington)
- Li, Haizhou (Institute for Infocomm Research)
- Liu, Jyi-Shane (National Chengchi University)
- Ma, Qing (Ryukoku University)
- Maekawa, Takafumi (Fuculty of Sociology, Ryukoku University)
- Matsumoto, Yuji (Nara Institute of Science and Technology)

Morey, Mathieu (LPL, Université d'Aix-Marseille & LMS, Nanyang Technological University)

- Natpratan, Natchanan (Kasetsart University)
- Netisopakul, Ponrudee (KMAKE LAB)
- Ogihara, Toshiyuki (University of Washington)
- Onsuwan, Chutamanee (Thammasat University)
- Okada, Makoto (Osaka Prefecture University)
- Otoguro, Ryo (Faculty of Law, Waseda University)
- Parinyawuttichai, Tanyaporn (Chulalongkorn University)
- Park, Jong C. (KAIST)
- Pittayaporn, Pittayawat (Chulalongkorn University)
- Pongpairoj, Nattama (Chulalongkorn University)
- Prévot, Laurent (Laboratoire Parole et Langage)
- Qi, Haoliang (Heilongjiang Institute of Technology)
- Qiu, Long (Institute for Infocomm Research)
- Ranaivo-Malançon, Bali (MALINDO)
- Ratitamkul, Theeraporn (Chulalongkorn University)
- Shaikh, Samira (State University of New York University at Albany)
- Shyu, Shu-Ing (National Sun Yat-sen University)
- Siegel, Melanie (Hochschule Darmstadt)
- Singhapreecha, Pornsiri (Thammasat University)
- Smith, Simon (Coventry University)
- Sornlertlamvanich, Virach (National Electronics and Computer Technology Center)
- Srioutai, Jiranthara (Chulalongkorn University)
- Su, Keh-Yih (Institute of Information Science, Academia Sinica)
- Suchato, Atiwong (Chulalongkorn University)
- Tasanawan, Soonklang (Sirindhorn International Institute of Technology)
- Thepkanjana, Kingkarn (Chulalongkorn University)
- Tseng, Yuen-Hsien (National Taiwan Normal University)
- Uehara, Satoshi (Tohoku University)
- Van Genabith, Josef (Dublin City University)

Villavicencio, Aline (Universidade Federal do Rio Grande do Sul)
Wang, Hsu (Yuan Ze University, Taiwan)
Wijitsopon, Raksangob (Chulalongkorn University)
Wu, Jiun-Shiung (National Chung Cheng University)
Yang, Cheng-Zen (Yuan Ze University)
Yeom, Jae-II (Hongik University)
Yokoyama, Satoru (Tohoku University)
Yu, Liang-Chih (Yuan Ze University)
Zhang, Jiajun (Institute of Automation Chinese Academy of Sciences)
Zhao, Hai (Shanghai Jiao Tong University)
Zhou, Yu (Chinese Academy of Sciences)
Zock, Michael (CNRS-LIF)