

Dr. Rachel Edita O. Roxas

Professional Engagement

AWARDS RECEIVED

AWARDEE. Gawad Lasalyano. Ika-10 ng Agosto 2012. Gawad Br. Cecilio Hojilla FSC, Namumukod-tanging mga Katuwang sa Lasalyanong Misyon, Pakikisangkot sa Komunidad (Mga Katuwang sa Panlabas), DLSU.

AWARDEE. Distinguished Alumni award. UPLB-CAS-ICS. December 13, 2012.

7TH PLACER, National Licensure Examination for Teachers, Philippine Regulatory Commission, August 26, 2007 Examination, Philippines.

RESEARCH-RELATED GRANTS

INVITED PRESENTOR. Public Health in Asia: Rights, Risks, Redistribution, and Resilience, University of British Columbia, Vancouver, Canada, December 6 & 7, 2013.

Invited Guest. NUS-Research Institute. December 2012. Suzhou, China.

Invited Guest. Tajikistan, eParticipation and the gCIO program of the Philippines. 2012.

Visiting Scholar. School of Computing. National University of Singapore. Human Language Technology Research in the Philippines. Singapore, October, 2011.

Visiting Scholar. Department of Human Language Technology, InfoComm and Nanyang Technological University, Singapore, August, 2009

Visiting Scholar. Institute of Linguistics & Computational Linguistics and Chinese Language Processing, Academia Sinica, Taipei, Taiwan, February, 2008.

MEMBERSHIP IN ORGANIZATIONS

Working Group Committee - Country representative. ASEAN- Machine Translation. July 2012 - June 2015. www.aseanmt.org

Member, Board, AsiaLex <http://www.asialex.org/>, August 22, 2013 to present.

Country Representative. O-COCOSDA <http://www.cocosda.org/>. 2008 to present.

Country Representative. Pacific Asia Conference on Language, Information and Computation (PACLIC) <http://www.decode.waseda.ac.jp/paclic-steering/>. 2007 to

present.

Member, Technical Panel in IT Education, Commission on Higher Education (CHED), Philippine Government, March 2011 to December 2011. Chair, Technical Committee on CS, CHED, Philippine Government, March 2011 to December 2011. Extension of Appointment: March 2012 - December 2014.

Founding President, Special Interest Group on Natural Language Processing (SIG NLP) of the Computing Society of the Philippines (CSP), November 2010- present.

Member of the Board, Computing Society of the Philippines, 2009- present.

Research

PUBLICATIONS

2015

Journal of Vocational Behavior. (07 February 2015). Career optimism: The roles of contextual support and career decision-making self-efficacy. Patrick Raymund James Matutina Garcia; Simon Lloyd D Restubog; Prashant Bordia; Sarbari Bordia; **Rachel Edita O Roxas**. To appear. Impact factor: 2.03; 5-year impact factor: 3.43. <http://www.sciencedirect.com/science/article/pii/S0001879115000111>

2014

Malay Journal. (2014). To appear. Paggamit ng Natural Language Processing bilang Gabay sa Pagtuklas at Pagsiyasat ng Tema sa mga Tweet tuwing Halalan / Using Natural Language Processing in the Discovery and Analysis of Themes of Tweets during Elections, **Rachel Edita Roxas**, Nathaniel Oco, Charibeth Cheng, Ma. Divina Gracia Roldan, Zelinna Pablo

Nocon, N., N. Oco, J. Ilao, **R E. Roxas**. "*Philippine Component of the Network-based ASEAN Language Translation Public Service*." The 7th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management. Hotel Centro, Puerto Princesa City, Philippines. 12-16 November 2014.

Oco, N., L.R. Syliongka, J. Ilao, and **R.E. Roxas**. "*Natural Language Processing: Tools and Techniques for Linguistic Studies*." The 12th Philippine Linguistics Congress, University of the Philippines, Quezon City, Philippines. 26-28 November 26-28 2014. Conference Presentation. (no published proceedings).

Pablo, Z. P., Oco, N. Roldan, M. D., Cheng, C. and **Roxas, R. E.** (2014). *Toward an enriched understanding of factors influencing Filipino behavior during elections*

through the analysis of Twitter data. Philippine Political Science Journal. Vol. 35, No. 02, pp. 1-22, <http://dx.doi.org/10.1080/01154451.2014.964794>, Routledge, Taylor & Francis Group. ISI Journal.

<http://www.tandfonline.com/doi/pdf/10.1080/01154451.2014.964794>

Roxas, R. E. L., Concepcion, C. Lagadia and F. Ecaldre. (2014, September). *Service Learning Pedagogy in Nursing: Towards Health Improvement of the Community*. Paper accepted for presentation at the Philippine Educational Measurement and Evaluation Association Conference (PEMEA), Manila.

Roxas, R.E., N. Oco, and L.R. Syliongka. (2014, September). Philippine Country Report. Oriental COCOSDA

Toledano, L.S., Lapinid, M.R.C., and **Roxas, R.E.** (2014, July). *The noble road to learning: Cases of service learning pedagogy in higher education*. Paper accepted for presentation at the 28th International Congress of Applied Psychology (ICAP). Paris, France.

Oco, N., Syliongka, L.R., Ilao, J., and **Roxas, R.E.** 2014. N-gram based Language Identification and Rule-based Grammar Checking. In Proceedings of the 14th Philippine Computing Science Congress (Davao City, Philippines, March 06-08, 2014). Published by the Computing Society of the Philippines, pp 244-250.

Oco, N., Sison-Buban, R., Syliongka, L.R., **Roxas, R.E.**, and Ilao, J. 2014. Ang Paggamit ng Trigram Ranking Bilang Panukat sa Pagkakahalintulad at Pagkakatipon ng mga Wika/Trigram Ranking: Metric for Language Similarity and Clustering. Malay 26 (2). April issue.

2013

Angeles, S., Ona, S., & **Roxas, R. E.** (2013). E-Participation for Health: Localization of Maternal Health and Childcare Programs in the Rural Community Through ICT, Public Health in Asia: Rights, Risks, Redistribution, and Resilience, University of British Columbia, Vancouver, Canada, December 6 & 7, 2013.

Pablo, Z., Ona, S., **Roxas, R.E.**, Cheng, C., Borra, A., & Oco, N. (2013). The Democracy Cube as a Framework for Guiding Participatory Planning for Community-Based IT Initiatives. Pacific Asia Conference on Information Systems.

Oco, N., Syliongka, L.R., Ilao, J., **Roxas, R.E.** (2013). Dice's Coefficient on Trigram Profiles as Metric for Language Similarity. 16th Oriental COCOSDA.

Oco, N., Ilao, J., **Roxas, R.E.** (2013). 2013 Philippine Country Report: Recent Trends in Speech and Natural Language Processing. 16th Oriental COCOSDA.

Oco, N., Ilaio, J., **Roxas, R.E.**, Syliongka, L.R. (2013). Measuring Language Similarity using Trigrams: Limitations of Language Identification. 3rd International Conference on Recent Trends in Information Technology.

Oco, N., Wong, J., Ilaio, J., **Roxas, R.E.** (2013). Detecting Code-Switches using Word Bigram Frequency Count. 9th National Natural Language Processing Research Symposium.

Oco, N., Ilaio, J., **Roxas, R.E.**, Sison-Buban, R., Bonus, D.E. (2013). ASEAN MT-Phil: Philippine Component of the ASEAN Machine Translation Project. 9th National Natural Language Processing Research Symposium.

2012

Borlongan, A. M., Lim, J., **Roxas, R. E. O.** (2012). University Students' Attitudes towards EnglishTagalog Code-Switching in Classroom Instruction. TESOL Journal.

Ilaio, J, **Roxas, R.** and Oco, N. Oriental COCOSDA 2012 Philippine Country Report. Proceedings of the Oriental-COCOSDA Conference, December 2012.

Oco, N. and **Roxas, R.** "Pattern Matching Refinements to Dictionary-Based Code-Switching Point Detection", 26th Pacific Asia Conference on Language, Information and Computation (PACLIC-26), poster presentation, November 8-10, 2012, Bali, Indonesia.

2011

Borra, A., Cheng, C., Ona, S., and Roxas, R. 2011. Information Extraction and Opinion Organization for an eLegislation Framework for the Philippine Senate. Conference on Human Language Technology for Development (HLTD 2011), May 2-5, 2011, Alexandria, Egypt..

Dita, S. and Roxas, R. 2011. Philippine Languages Online Corpora: Status, Issues, and Prospects. In the Proceedings of the 9th Workshop on Asian Language Resources collocated with IJCNLP 2011 (ALR 9), November 12-13, 2011, Chiang Mai, Thailand.

Roxas, R., Borra, A., Cheng, C, and Ona, S. 2011. eParticipation towards Legislation: The Case of the Philippines. In Electronic Government and Electronic Participation (Eds. Janssen, M, Macintosh, A., School, H, Tambouris, E, Wimmer, M, de Bruijn, and Tan, Y.-H). Trauner Druck: Austria. 327-334.

2010

Buhay, E., Evardone, M., Nocon, H., Dimalen, D, and Roxas, R. AUTOLEX: An Automatic Lexicon Builder for Minority Languages using an Open Corpus. 24th Pacific

Asia Conference on Language, Information and Computation (PACLIC-24), poster presentation, November 4-7, 2010, Sendai, Japan.

Roxas, R., Ona, S. et al., 2010. Towards Strengthening Electoral Reforms using ICT. *Journal of e-Governance* 33 (4) 203-224. ISSN 1878-7673/10/ IOS Press. DOI 10.3.3233/GOV-2010-0231.

Borra, A, A. Pease, R. Roxas and S. Dita. Introducing Filipino WordNet. 5th Global WordNet Association conference, January 31 to February 4, 2010, India Institute of Technology, Bombay, India.

2009

Dita, S., R. Roxas and P. Inventado. Building Online Corpora of Philippine Languages. 23rd Pacific Asia Conference on Language, Information and Computation (PACLIC-23), poster presentation, held on December 3-5, 2009, Hong Kong.

Cheng, Tin Tin, Jeffrey Leonard Cua, Mark Davies Tan, Kenneth Gerard Yao and Roxas, R. Information Extraction from Legal Documents, Proceedings of the Symposium on NLP 2009 (IEEE), Bangkok, Thailand, October 21-23, 2009.

Lim, Nathalie Rose, P. Saint-Dizier, B. Gay and Roxas, R. A Preliminary Study of Comparative and Evaluative Questions, Proceedings of the Symposium on NLP 2009 (IEEE), Bangkok, Thailand, October 21-23, 2009.

Cu, J. and Roxas, R. Speech Corpora and Applications: Philippine Country Report, Proceedings of the Oriental-COCOSDA Conference, August 10-11, 2009.

Roxas, R. C. Cheng and N. Lim. Philippine Language Resources: Trends and Directions, Proceedings of the ACL Workshop for Asian Language Resources, pp 131-138, August 6-7, 2009.

N. Lim, P. Saint-Dizier and Roxas, R. Some Challenges in the Design of Comparative and Evaluative Question Answering Systems, Proceedings of the ACL Workshop for Knowledge and Reasoning for Answering Questions, August 6, 2009.

2008

Rachel Edita Roxas, Allan Borra, Charibeth Ko, Nathalie Rose Lim, Ethel Joy Ong, Michelle Wendy Tan. Building Language Resources for a Multi-Engine English-Filipino Machine Translation System. *Language Resources and Evaluation*. Volume 42, Number 1, ISSN 1574-020X. 2008 pp. 183-195.

Tiu, E. P. and Roxas, R. Automatic Bilingual Lexicon Extraction for a Minority Target Language. 22nd Pacific Asia Conference on Language, Information and Computation

(PACLIC-22), Cebu City, Philippines, November 20-22, 2008. A Full Paper Presentation. Best Paper Awardee by PACLIC Steering Committee. 368-376.

Roxas, R, Borra, A., Cheng, C. Lim, N. Ong, E., and Tan, M. Building Language Resources for a Hybrid English-Filipino Machine Translation System. *Journal on Language Resources and Evaluation, Asian Language Technologies, ISI, (2008), 42:183-195.* DOI 10.1007/s10579-007-9037-5.

2007

Dimalen, D. and Roxas, R. 2007. AutoCor: A Query Based Automatic Acquisition of Corpora of Closely-related Languages. In the Proceedings of the **21st Pacific Asia Conference on Language, Information and Computation Conference 2007.**

2006

Fortes-Galvan, F and Roxas, R. 2006. A Constraint-based Morphological Analyzer for Concatenative and Non-concatenative Morphology. In the Proceedings of the **20th Pacific Asia Conference on Language, Information and Computation Conference 2006.** Wuhan, China, November 1-4, 2006.

Domingo, E. and Roxas, R. 2006. Automatic Target Word Disambiguation Using Syntactic Relationships. In the Proceedings of the **20th Pacific Asia Conference on Language, Information and Computation Conference 2006.** Wuhan, China, November 1-4, 2006.

Roxas, R. and N. R. Lim. 2006. Automatic Generation of Plagiarism Detectors Among Student Programs. In the Proceedings of the **7th IEEE International Conference on Information-Based Higher Education and Training,** Sydney, Australia, July 10-13, 2006.

OTHER PUBLICATIONS

2011

Roxas, R. 2011. Towards the Development of a Framework on Homeschooling in the Philippines. 2nd Educators' Congress, Manila, September 11, 2011.

Roxas, R. 2011. Annotating the ICE-Philippines corpus: A work in progress. In *Studies in Philippine English: Exploring the Philippine Component of the International Corpus of English.* Dr. Ma. Lourdes D. Bautista (Ed). University Academic Publications Office, DLSU, Manila, 2011.

2010

Roxas, R. Practical Applications of Human Language Technology: the Philippine Experience. Philippine Computing Journal, special NLP edition. Volume 5, Number 2, ISSN 1908-1995. 2010. pp. 6-9.

Roxas, R., Alcantara, D., and Borlongan, A., Language Documentation and Applications in the Philippines: Implications for Mother Tongue-Based Multilingual Education, Philippine Education Research Journal (PERJ), 2010.

Dy, J., Laureano, P., Liu, M. D., Syliongka, & Roxas, R. MMDT: Model Driven Development Tool as Aid for Learning Programming Fundamentals. Philippine Computing Journal, Vol. 5, Number 1, ISSN 1908-1995, pp. 47-51, 2010.

Roxas, R., and Borra, A., Human Language Technology: the Philippine Experience. Philippine IT Journal, 2010.

Roxas, R. Exploring the Role of ICT in Homeschooling and Implications in the Philippines. Proceedings of the First International Conference on Technology in Education, TouchPoint 2010. pp. 182-190. March 4-5. Centry Park Hotel, Manila, Philippines.

Roxas, R., Alcantara, D., & Borlongan, A. Language Documentation and Applications in the Philippines: Implications for Mother Tongue-Based Multilingual Education. 1st Philippine Conference Workshop on Mother Tongue Based Multilingual Education. 2010, at the Capitol University, Cagayan de Oro City. Workshop on "Language and data preservation", February 20, 2010, 1:00-3:00pm.

2009

Roxas, R., A. Borra, C. Cheng, J. Cu, N. Lim and E. Ong. Human Language Technology: the Philippine Experience. DLSU-Osaka Conference, September 21-23, 2009.

Roxas, R. N. Lim and C. Cheng. The Natural Language Processing Laboratory: the CCS-DLSU Experience. Philippine Computing Science Congress 2009. March 2-3, 2009, Siliman University, Dumaguete City.

Roxas, R., G. Asenjo, M. Corpuz, S. Dita, P. Inventado, R. Sison-Buban, and D. Taylan. Online Corpora of Philippine Languages. 2nd DLSU Arts Congress 2009: Arts and the Environment. DLSU. February 11, 2009.

2008

Cheng, C., Roxas, R, A. B. Borra, N. R. L. Lim, E. C. Ong and S. L. See. e-Wika: Digitalization of Philippine Language. DLSU-Osaka Workshop, De La Salle University,

2008.

Fontanilla, G., and Roxas, R. A Hybrid Filipino-English Machine Translation System. Science and Technology Congress, De La Salle University, July 23, 2008.

Del Mundo, G, Go, L., Manalili, S., and Roxas, R. Windows Registry Infection Detection using Malware Source Code Analysis. Science and Technology Congress, De La Salle University, July 23, 2008.

2007

Roxas, R. 2007. e-Wika: Connecting the Philippine Islands through Language. In the Proceedings of the 4th National Natural Language Processing Research Symposium, DLSU-M, June 14-16, 2007.

Miguel, D. and Roxas, R. 2007. Comparative Evaluation of Tagalog Part of Speech Taggers. In the Proceedings of the 4th National Natural Language Processing Research Symposium , DLSU-M, June 14-16, 2007.

2006

Domingo, E. and Roxas, R. 2006. Utilizing Clues in Syntactic Relationships for Automatic Target Word Sense Disambiguation. In the Journal of Research for Science, Computing and Engineering. Volume 3, Number 3, December 2006, pp18-24.

PAPER PRESENTATIONS

2011

Invited Talk entitled “Human Language Technology Research in the Philippines”, Resource Speaker, NLP laboratory, School of Computing, National University of Singapore, October 21, 2011, Singapore.

Invited Talk entitled “The role of Technology in Language Learning”, Resource Speaker, UST Department of English First National Conference titled “English, Englishes, and Englishing in Multilingual and Multimedia Environments: From Theory to Practice”, May 19-20, 2011, Manila.

Invited Talk entitled “Computing Research: towards a progressive Philippines”, 6th Cavite IT Youth Convention, February 24, 2011, Bacoor, Cavite.

2010

Invited Talk entitled “Analytics Software for you and your call Center: Automatic Detection of Code Switching Points”, Talking Across the World (TAW), November 26-

27, 2010, Manila, Philippines.

Invited Talk entitled “Human Language Technologies in the Philippines”, National Conference on IT Education (NCITE) 2010, November 21, 2010, Boracay, Philippines.

Paper Presentation entitled The Role of Technology in the Internationalization of Teacher Education: The Philippine Context. Educators’ Congress, September 30 - October 2, 2010, DLSU, Manila.

Invited Talk entitled “The Future of Human Language Technologies”, Y4IT congress, UPD, September 15, 2010.

Invited Talk entitled “Practical Applications on Human Language Technologies: the Philippine Experience” at the MALINDO Workshop 2010, Jakarta, Indonesia, August 2, 2010.

1st Philippine Conference Workshop on Mother Tongue Based Multilingual Education. February 18-20, 2009, at the Capitol University, Cagayan de Oro City. Speaker for the Workshop on “Language and data preservation”, February 20, 2010, 1:00-3:00pm.

eHealth: ICT in Health. DLS Health Science Institute, January 26, 2010.

Human Computer Interactions: Now and the Future (Empathic computing and NLP), SM Bacoor, Cavite, January 22, 2010.

2009

Human Language Technologies: the Philippine Experience, University of San Carlos, Cebu City, Philippines, October 23, 2009, and University of Saint Louis, Baguio City, January 8, 2010.

Flores, D and Roxas, R. Partial Parsing of the Philippine Component of the International Corpus of English (ICE-PHI), International Association for World Englishes Conference, Cebu City, October 22-24, 2009.

e-Wika: Connecting the Philippine Islands through Language, Lecture as Visiting Scholar, Nanyang Technological University, August 11, 2009.

2008

Automatic tools for the analysis of the Philippine component of the International Corpus of English. 2008 Linguistic Society of the Philippines International Conference, University of Sto. Tomas, Quezon City, April 28-30, 2008.

e-Wika: Philippine Connectivity through Language. Visiting Scholar, Institute of

Linguistics, Academia Sinica, Taipei, Taiwan, February 25, 2008.

Building Language Resources and Tools for Philippine Languages. Visiting Scholar, Computational Linguistics and Chinese Language Processing, Academia Sinica, Taipei, Taiwan, February 26, 2008.

2007

Towards Building the Philippine Corpus. Professorial Chair Lecture. 2nd Consultative Workshop towards building the Philippine corpus, 408 Yuchengco Hall, DLSU-M, November 28, 2007.

e-Wika: Philippine Connectivity through Languages. 4th National NLP Research Symposium, CCS, DLSU, June 14-16, 2007.

Comparative Evaluation of Tagalog Part of Speech Taggers. 4th National NLP Research Symposium, CCS, DLSU, June 14-16, 2007.

Generation of Program Plagiarism Detectors, Professorial Chair Lecture. DLSU-Manila, March 1, 2007.

Morphological Analysis for Concatenative and Non-concatenative Phenomena, Workshop on Special Topics on Morpho-Syntactic Analysis, School of Asian Applied Natural Language Processing for Linguistics Diversity and Language Resource Development (ADD-2), Bangkok, Thailand, March 6 - March 14, 2007.

PROJECTS

Empowering Local Communities through e-Participation: Exploring Tipping Points in DRRM and MHCC through ICT. DLSU Challenge Grant Recipient.

Development of an Online Philippine Corpus: Part II. June 1, 2011 to August 31, 2011. Funded by the National Commission for Culture and the Arts, Philippine Government.

Automatic Detection of Code Switching. July 15, 2011 to July 14, 2013. funded by the Department of Science and Technology, PCIEERD, Philippine Government.

Developing Natural Language Processing/Data Mining Application for eLegislation. July 1, 2009 to May 31, 2011. Funded by the International Development Research Centre (IDRC) through IdeaCorp.

Partially Parsing the Philippine Component of the International Corpus of English (ICE-PHI). January 2009 to Present. DLSU funded Project.

Development of an Online Philippine Corpus. July 1, 2008 to June 30, 2009. funded by the National Commission for Culture and the Arts, Philippine Government.

Design and Implementation of a Plagiarism Detector Generator for Object-oriented Programs. January 2007 to December 2007. DLSU funded Project.

A Hybrid English-Filipino Machine Translation System. PCASTRD-DOST Funded Project. March 2005 to February 2008, DLSU-Manila, Philippines.

A Web-based Resource Builder for a Hybrid Machine Translation System for Philippine Languages. PCASTRD-DOST Funded Project. 2003-2004. DLSU-Manila, Philippines.