

Suppawong Tuarob

Address

Faculty of ICT
Mahidol University
999 Puttamonthon Rd. Salaya
Nakhon Pathom 73170
Thailand

Homepage: sites.google.com/mahidol.edu/stuarob
Tel: +66 2 441 0909
Fax: +66 2 849 6099
Email: suppawong.tua@mahidol.edu
Last updated: March 4, 2019

Research Interests

Big Data, Information Retrieval, Machine Learning, Data Science and Engineering, Search Engines, Statistical Topic Modeling, Deep Learning, Social Media, Industrial Informatics

Professional Experience

Data Scientist (Talent Mobility Program), Western Digital (Thailand), since August 2017

Assistant Professor of Computer Science, since December 2017

Lecturer, 2015-2017

Mahidol University, Thailand

Visiting Professor of Engineering, Inha University, South Korea, May – August 2018

Graduate Research Assistant, Pennsylvania State University, USA, 2010-2015

Research Intern, IBM Almaden Research Center, San Jose, CA USA, May – August 2014

Research Intern, Microsoft Research, Redmond-Bellevue, WA USA, May – August 2013

Research Intern, DataONE (Data Observation Network for Earth), USA, June – August 2012

Research Intern, Pacific Northwest National Laboratory (PNNL), USA, June – August 2011

Education

Pennsylvania State University College of Engineering, University Park, PA USA

Ph.D. in Computer Science and Engineering, August 2010 – May 2015

Advisors: Dr. C. Lee Giles and Dr. Prasenjit Mitra

Pennsylvania State University College of Engineering, University Park, PA USA

M.S. in Industrial Engineering, October 2014 – August 2015

Advisor: Dr. Conrad Tucker

University of Michigan College of Engineering, Ann Arbor, MI USA

M.S.E. in Computer Science and Engineering, December 2009 – May 2010

University of Michigan College of Engineering, Ann Arbor, MI USA

B.S.E. (Magna Cum Laude) in Computer Science, September 2006 – December 2009

Minors in Mathematics and Economics

Selected Honors

- Korean International Scholar Exchange Fellowship (ISEF), 2017-2018
- Good Dissertation Award 2017, National Research Council of Thailand, 2017

- Graduate Research Assistantship, Penn State, August 2010 – August 2015
- Graduate Teaching Assistantship, Penn State, August 2014 – May 2015
- Best Poster Award in the Institute of Industrial Engineers (IIE) Family Day at Pennsylvania State University, 2015
- Penn State D.A.T.A. Lab Most Valuable Player Award (Recognition for highest research productivity & scholarly excellence), 2014
- NSF and ASME sponsored travel fellowship to attend the 3rd Publish-ED workshop in Grenoble, France, January 2014
- Best Student Paper Award, Joint Conference on Digital Libraries 2013
- Penn State CHIDS (Center for Health Information & Decision Systems) Scholar Research Fellowship, August 2012 – May 2013
- University Honors, University of Michigan, 4 awards from Winter 2007 – Fall 2009
- Dean's List, University of Michigan, 9 awards from Winter 2007 – Fall 2009
- James B. Angell Scholar, University of Michigan, 2 awards from Winter 2007 – Fall 2009
- Royal Thai Government Scholarship, 2005 – 2010
- 2nd place, National Software Contest 2005, Thailand, 2005
- 1st place, Microsoft IT Youth Challenge 2004, Thailand 2004
- 1st place, Intel Technology Challenge 2003, Thailand 2003

Selected Professional Service

Journal Reviewer:

- Elsevier Neurocomputing
- Elsevier Journal of Biomedical Informatics (JBI)
- Elsevier Information Sciences
- IEEE Transactions on Services Computing (TSC)
- IEEE Transactions on Big Data (TBD)
- IEEE Transactions on Computational Social Systems (SMC)
- Springer International Journal on Digital Libraries (IJDL)
- Springer Frontiers of Information Technology & Electronic Engineering (FITEE)
- ASME Journal of Mechanical Design (JMD)
- **ASME Journal of Computing and Information Science (JCISE)**

Conference Reviewer: ACM/IEEE JCDL, ACM SIGIR, ASME IDETC/CIE, ICML, ACM CIKM, ACM WWW, ACM KDD

Conference Organizing Committee

- *Steering and Organizing Committee*, The 15th International Joint Conference on Computer Science and Software Engineering (JCSSE 2018)
- *Steering Committee*, The 14th International Joint Conference on Computer Science and Software Engineering (JCSSE 2017)
- *Organizing Committee*, The 2nd International Conference on Information Technology (InCIT 2017)
- *Organizing Committee*, National Conference on Information Technology (NCIT 2017)

Technical Program Committee

- The 11th IEEE International Conference on Ubi-Media Computing (Ubi-Media 2018)
- International Conference: Information Society And Smart Cities 2018 (ISC 2018)
- The 5th Workshop on Big Scholarly Data (BigScholar 2018), co-located with KDD 2018
- The 11th IEEE International Conference on Ubi-Media Computing (Ubi-Media 2017)
- Workshop on Scholarly Big Data: AI Perspectives, Challenges and Ideas (IJCAI-WSBD 2016), co-located with IJCAI 2016

Selected Research Grants

Development of Machine Learning Models to Facilitate Test-Capex Reduction, Talent Mobility (TM) Program, Western Digital Thailand, August 2017 - July 2019, Suppawong Tuarob (Fellowship Recipient)

Investigating Trends and Evolutional Development of Algorithms in Temporal Scholarly Big Data, Korean International Scholar Exchange Fellowship (ISEF), Korea Foundation for Advanced Studies (KFAS), May 2018 – August 2018, Suppawong Tuarob (Fellowship Recipient)

Automatic Detection of Inappropriate Thai Language Usages in Social Networks, Young Scientist and Technologist Program (YSTP), National Science and Technology Development Agency (NSTDA), Amount ฿115,000, August 2017 - May 2018, Arnon Puitrakul (PI), Suppawong Tuarob (Advisor)

Study of Algorithmic Evolution in Scientific Literature (การศึกษาวิวัฒนาการของอัลกอริทึมในวรรณกรรมทางวิทยาศาสตร์), Research Grant for New Scholar (ทุนพัฒนาศักยภาพในการทำงานวิจัยของอาจารย์รุ่นใหม่), Thailand Research Fund (TRF), Amount ฿600,000, April 2017 – March 2019, Suppawong Tuarob (PI)

Mining Implicit Customer Preferences within Large Scale Social Media Networks (การแปลความหมายของบริบทเกี่ยวกับผลิตภัณฑ์ที่ถูกแสดงโดยปริยายในสื่อสังคมขนาดใหญ่), Young Researcher Grant (ทุนนักวิจัยรุ่นใหม่), Mahidol University, Amount: ฿100,000, July 2016- June 2017, Suppawong Tuarob (PI)

Publication Statistics

Journal Articles: 9

Conference Papers: 28

Workshop Papers: 3

Citations: Google Scholar: 753 with h-index of 17

Scopus: 254 (excluding self-citations) with h-index of 12

Selected Publications (Full publication list: <https://goo.gl/ardqSK>)

Referred Journals:

Suppawong Tuarob, Sunghoon Lim, and Conrad S Tucker. “Automated Discovery of Product Feature Inferences within Large Scale Implicit Social Media Data”. ASME Journal of Computing and Information Science in Engineering (2018).

Suppawong Tuarob, Ray Strong, Anca Chandra, and Conrad S Tucker. “Discovering Discontinuity in Big Financial Transaction Data”. ACM Transactions on Management Information Systems (2018).

Suppawong Tuarob, Conrad S Tucker, Soundar Kumara, C. Lee Giles, Aaron L Pincus, David E Conroy, and Nilam Ram. “How Are You Feeling?: A Personalized Methodology for

Predicting Mental States from Temporally Observable Physical and Behavioral Information”. Elsevier Journal of Biomedical Informatics (2017).

Suppawong Tuarob, Sumit Bhatia, Prasenjit Mitra, and C. Lee Giles. “AlgorithmSeer: A System for Extracting and Searching for Algorithms in Scholarly Big Data”. IEEE Transactions on Big Data (2016).

Jian Wu, Kyle William, Hung-Hsuan Chen, Madian Khabisa, Cornelia Caragea, Suppawong Tuarob, Alexander Ororbia, Douglas Jordan, Prasenjit Mitra, C Lee Giles. “CiteSeerX: AI in a Digital Library Search Engine”. AI Magazine (2015).

Suppawong Tuarob, Line C Pouchard, Prasenjit Mitra and C. Lee Giles. “A Generalized Topic Modeling Approach for Automatic Document Annotation”. Springer International Journal on Digital Libraries (2015).

Suppawong Tuarob and Conrad S Tucker. “Automated Discovery of Lead Users and Latent Product Features by Mining Large Scale Social Media Networks” ASME Journal of Mechanical Design (2015).

Suppawong Tuarob and Conrad S Tucker. “Quantifying Product Favorability and Extracting Notable Product Features using Large Scale Social Media Data”. ASME Journal of Computing and Information Science in Engineering (2015).

Suppawong Tuarob, Conrad S Tucker, Marcel Salathe and Nilam Ram. “An Ensemble Heterogeneous Classification Methodology for Discovering Health-Related Knowledge in Social Media Messages”. Elsevier Journal of Biomedical Informatics (2014).

Referred Conference Papers:

Suppawong Tuarob and Jarernsri L Mitranont, “Automatic Discovery of Abusive Thai Language Usages in Social Networks”. The 19th International Conference on Asia-Pacific Digital Libraries (ICADL 2017), Bangkok, Thailand.

Iqra Safder, Junaid Sarfraz, Saeed-Ul Hassan, Mohsen Ali and Suppawong Tuarob, “Detecting Target Text related to Algorithmic Efficiency in Full Text Digital Libraries using Recurrent Convolutional Neural Network Model”. The 19th International Conference on Asia-Pacific Digital Libraries (ICADL 2017), Bangkok, Thailand.

Suppawong Tuarob, Conrad S Tucker, Marcel Slathe, and Nilam Ram, "Modeling Individual-Level Infection Dynamics Using Social Network Information". The 24th ACM International Conference on Information and Knowledge Management (CIKM 2015), Melbourne, Australia.

Jian Wu, Jason Killian, Huaiyu Yang, Kyle Williams, Sagnik Ray Choudhury, Suppawong Tuarob and C. Lee Giles, " PDFMEF: A Multi-Entity Knowledge Extraction Framework for Scholarly Documents and Semantic Search". The 8th International Conference on Knowledge Capture (K-CAP 2015), Palisades, NY.

Suppawong Tuarob, Wanghuan Chu, Dong Chen, and Conrad S Tucker, "TwittDict: Extracting Social Oriented Keyphrase Semantics from Twitter". Proceedings of Novel Computational Approaches to Keyphrase Extraction Workshop (Keyphrase) co-located with (ACL 2015).

Suppawong Tuarob, Prasenjit Mitra and C. Lee Giles. “A Hybrid Approach to Discover Semantic Hierarchical Sections in Scholarly Documents”. The Thirteenth International Conference on Document Analysis and Recognition (ICDAR 2015), Nancy, France.

Suppawong Tuarob, Ray Strong, Jeannette Blomberg, Anca Chandra, Pawan Chowdhary, Sechan Oh, and Conrad S Tucker. "Automatic Discovery of Service Name Replacements Using Ledger Data". IEEE International Conference on Services Computing 2015 (SCC 2015), New York, USA.

Suppawong Tuarob and Conrad S Tucker "A Product Feature Inference Model Based for Mining Implicit Customer Preferences Within Large Scale Social Media Networks". In Proceedings of ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference 2015 (IDETC/CIE 2015), Boston, MA, USA.

Suppawong Tuarob and Conrad S Tucker. "Discovering Next Generation Product Innovations by Identifying Lead User Preferences Expressed Through Large Scale Social Media Data". In Proceedings of ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference 2014 (IDETC/CIE 2014), Buffalo, NY, USA.

Suppawong Tuarob, Conrad S Tucker, Marcel Salathe and Nilam Ram. "Discovering Health-Related Knowledge in Social Media Using Ensembles of Heterogeneous Features". The 22nd ACM International Conference on Information and Knowledge Management (CIKM 2013), San Francisco, CA, USA.

Suppawong Tuarob, Sumit Bhatia, Prasenjit Mitra and C. Lee Giles. "Automatic Detection of Pseudocodes in Scholarly Documents Using Machine Learning". The Twelfth International Conference on Document Analysis and Recognition (ICDAR 2013), Washington, DC, USA.

Suppawong Tuarob, Line C Pouchard and C. Lee Giles. "Automatic Tag Recommendation for Enrichment of Metadata Using Probabilistic Topic Modeling". ACM/IEEE Joint Conference on Digital Libraries (JCDL 2013), Indianapolis, IN, USA. (Best Student Paper Award)

Suppawong Tuarob, Prasenjit Mitra and C. Lee Giles. "A Classification Scheme for Algorithm Citation Function in Scholarly Works". ACM/IEEE Joint Conference on Digital Libraries (JCDL 2013), Indianapolis, IN, USA.

Sagnik Ray Choudhury, Suppawong Tuarob, Prasenjit Mitra, Lior Rokach and C. Lee Giles. "A Figure Search Engine Architecture for a Chemistry Digital Library". ACM/IEEE Joint Conference on Digital Libraries (JCDL 2013), Indianapolis, IN, USA.

Suppawong Tuarob and Conrad S Tucker. "Fad or Here to Stay: Predicting Product Market Adoption and Longevity Using Large Scale, Social Media Data". In Proceedings of ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference 2013 (IDETC/CIE 2013), Portland, OR, USA.

Suppawong Tuarob, Prasenjit Mitra and C. Lee Giles. "Taxonomy-based Query-dependent Schemes for Profile Similarity Measurement". In Proceedings of the 1st Joint International Workshop on Entity-oriented and Semantic Search (JIWES '12), co-located with SIGIR2012.

Suppawong Tuarob, Prasenjit Mitra, and C. Lee Giles. "Improving algorithm search using the algorithm co-citation network". In Proceedings of the 12th ACM/IEEE-CS joint conference on Digital Libraries (JCDL '12).

Sumit Bhatia, Suppawong Tuarob, Prasenjit Mitra, and C. Lee Giles. "An algorithm search engine for software developers". In Proceedings of the 3rd International Workshop on Search-Driven Development: Users, Infrastructure, Tools, and Evaluation (SUITE '11), co-located with ICSE2011.