

Peter F. Haddawy

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Research Interests

Artificial Intelligence, Medical and Public Health Informatics, Scientometrics.

Professional Experience

Professor, Faculty of ICT, since Jan 2014
Deputy Dean for Research, since Oct 2018
Director, Mahidol-Bremen Medical Informatics Research Unit, since Feb 2018
Mahidol University
Thailand

Honorary Professor of Medical Informatics, since June 2018
Faculty of Informatics
University of Bremen
Germany

Director, United Nations University International Institute for Software Technology, 2010 – 2013.

Vice President for Academic Affairs, Asian Institute of Technology (AIT), 2005 – 2010.

Professor, Computer Science and Information Management, AIT, 2005 – 2010.

Associate Professor, Computer Science and Information Management, AIT, 2000 – 2005.

Associate Professor (with tenure), Dept of EECS, University of Wisconsin-Milwaukee, 1996 – 2002.

Assistant Professor, Dept of EECS, University of Wisconsin-Milwaukee, 1991 – 1996.

Education

Doctor of Philosophy, Department of Computer Science
University of Illinois at Urbana-Champaign, August 1991.

Master of Science, Department of Computer Science
University of Illinois at Urbana-Champaign, December 1986.

Bachelor of Arts, Department of Mathematics
Pomona College, Claremont, California, May 1981

Selected Honors

Hanse-Wissenschaftskolleg Fellow (awarded twice), First: June – Aug 2017, May – Dec 2016, Second: June – Aug 2018.

Ranked 19th in Thailand among scientists in all fields and 1st among computer scientists, CSIC “Ranking of scientists in Thai Institutions according to their GSC profiles” under EU FP7 program ACUMEN, Feb 2015.

Graduate School/Univ. of Wisconsin-Milwaukee Foundation Research Award, 1999.

Fulbright Fellow, National Institute of Development Administration, Bangkok, Thailand, Spring 1997.

Shell Oil Company Fellow, 1990-91.

Avery-Brundage Scholar, University of Illinois, 1988-89.

Member Tau Beta Pi, Phi Kappa Phi honor societies.

Selected Professional Service

Senior consulting editor, *Radiology: Artificial Intelligence*, Feb 2019 – present.

Member editorial board, *Artificial Intelligence in Medicine*, 2017 – present.

Member editorial board, *Journal of the Thai Medical Informatics Association*, 2015 – present.

Chief Guest Editor, *Methods of Information in Medicine*, Special issue on Intelligent Clinical Training Systems, 2010.

Member editorial board *International Journal of Information Technology and Decision Making*, Feb 2001 – present.

Selected Research Grants

Mahidol University Office of International Relations, “Mahidol-Bremen Medical Informatics Research Unit”, Oct 2019 – Sept 2020, 2,000,000 THB.

U.S. Army International Technology Center Pacific (ITC-PAC), Contract FA5209-15-P-0183, “A Bayesian Approach to Situation Awareness in Crowdsensing for Disease Surveillance”, Sept 2015 – Aug 2016, \$50,000 USD.

Ministry of Defense, Kingdom of Thailand, “Quantitative Evaluation of Effectiveness and Realism of a Virtual Reality Simulator for Training of Army and Airforce Personnel”, Sept 2015 – June 2016, 2,263,000 THB.

European Union, Dragon - Sustaining Technology and Research (EU-China Collaboration) FP7 INCO-2012-2, Work package 5.3, Sept 2012 – Dec 2014, 89,280 Euros.

Subcontract from International Office of German Ministry for Education and Research (BMBF) under the SEA-EU-NET EU FP7 INCO-NET project, “Analysis of Research Strengths of ASEAN Countries”, July 2010 – Oct 2012, \$60,000 USD.

Hokkaido University, “Research Benchmarking for Alternative University Appraisal”, 2012, \$15,000 USD.

Elsevier, “Global Research Benchmarking System”, Oct 2012 – Sept 2014, Scopus custom data, value: \$360,000 USD.

Elsevier, “Global Research Benchmarking System”, July 2010 – Dec 2012, multiple grants totaling \$211,500 USD.

Selected Invited Talks and Keynote Addresses

12th Asia Pacific Health Rhythm Society Scientific Session, “Intelligent Virtual Environments for Surgical Training: Prospects and Challenges”, Oct 2019.

Joint International Tropical Medicine Meeting 2018, “Large-scale detailed mapping of dengue vector breeding sites using street view images”, Bangkok, Dec 2018.

InCIT 2018, “Intelligent Virtual Environments for Surgical Training”, Keynote Address, Khon Kaen, Oct 2018.

MilSim Asia, “Intelligent Virtual Training Environments for High-Precision, High-Stakes Procedures”, Singapore, Jan 2017.

7th Thailand-US Education Roundtable, “Finding Your Niche in Research”, Bangkok, Thailand, Feb 2016.

Spatial 2015, Spatial Information for Human Health, “A Bayesian Approach to Situation Awareness in Crowdsensing for Disease Surveillance”, Center for Spatial Studies, UC Santa Barbara, Dec 2015.

4th Asia Pacific Conference on Public Health, “Spatio-Temporal Bayesian Networks for Niche Modeling of Vector-Borne Disease”, Kuantan, Malaysia, Sept 2015.

Mobiles for Development Forum Asia, “Making Sense of Crowdsourced Real-time Data”, USAID Regional Office, Bangkok, January 2015.

Doctoral Student Supervision

Name	Year Graduated, University
Liem Ngo	1997, University of Wisconsin-Milwaukee
Vu Ha	2001, University of Wisconsin-Milwaukee
Angelo Restificar	2004, University of Wisconsin-Milwaukee
Siriwan Suebnukarn	2005, Asian Institute of Technology
Churee Theetranont	2006, Asian Institute of Technology
Hameedullah Kazi	2010, Asian Institute of Technology
Phattanapon Rhienmora	2012, Asian Institute of Technology
Saeed Ul Hassan	2012, Asian Institute of Technology
Myat Su Yin	2018, Mahidol University/University of Bremen
Narumol Vannaprathip	Current student
Chaitawat Sa-Ngamuang	Current student

Publication Statistics

Monographs: 1

Journal Articles: 55

Conference Papers: 84

Book Chapters: 4

Workshop Papers: 24

Edited Volumes: 5

Citations: Google Scholar: 4,386 with h-index of 37

Scopus: 1,453 (excluding self-citations) with h-index of 22

Selected Publications (Full publication list: <https://www.ict.mahidol.ac.th/th/wp-content/subweb/personal/~haddawy/>)

Haddawy P, Wettayakorn P, Nonthaleerak B, Su Yin M, Wiratsudakul A, Schöning J, et al. Large-scale detailed mapping of dengue vector breeding sites using street view images. *PLoS*

Neglected Tropical Diseases 13(7): e0007555, July 29, 2019.
<https://doi.org/10.1371/journal.pntd.0007555>

T. Siriapisitha, W. Kusakunnirana, P. Haddawy, 3D segmentation of exterior wall surface of abdominal aortic aneurysm from CT images using variable neighborhood search, *Computers in Biology and Medicine*, 107, pp 73-85, April 2019.

P. Haddawy, M. Su Yin, T. Wisanrakkit, R. Limsupavanich, P. Promrat, S. Lawpoolsri and P. Sa-angchai, Complexity-Based Spatial Hierarchical Clustering for Malaria Prediction, *Journal of Healthcare Informatics Research*, 2(4), pp 423-447, Dec 2018.

T. Siriapisith, W. Kusakunniran, P. Haddawy, Outer wall segmentation of abdominal aortic aneurysm by variable neighborhood search through intensity and gradient spaces, *Journal of Digital Imaging*, 31(4), pp 490-504, Aug 2018.

C. Sa-ngamuang, P. Haddawy, V. Luvira, W. Piyaphanee, S. Iamsirithaworn, S. Lawpoolsri, Accuracy of Dengue Clinical Diagnosis with and without NS1 Antigen Rapid Test: Comparison between Human and Bayesian Network Model Decision, *PLOS Neglected Tropical Diseases*, 12(6): e0006573, June 2018.

P. Haddawy, A.H.M. Imrul Hasan, R. Kasantikul, S. Lawpoolsri, P. Sa-angchai, J. Kaewkungwal, P. Singhasivanon, Spatiotemporal Bayesian Networks for Malaria Prediction, *Artificial Intelligence in Medicine*, 84, pp 127-138, 2018.

M. Su Yin, P. Haddawy, S. Suebnukarn, P. Rhienmora, Automated Outcome Scoring in a Virtual Reality Simulator for Endodontic Surgery, *Computer Methods and Programs in Biomedicine*, 153, pp 53-59, 2018.

N. Vannapraphip, P. Haddawy, H. Schultheis, S. Suebnukarn, P. Limsuvan, A. Intaraudom, N. Aiemplaor, C. Teemuenvai, A Planning-Based Approach to Generating Tutorial Dialog for Teaching Surgical Decision Making, *Proc. 14th Int'l Conf. on Intelligent Tutoring Systems*, Montreal, 11-15 June 2018.

P. Haddawy, S. Hassan, C.W. Abbey, I.B. Lee, Uncovering Fine-Grained Research Excellence: The Global Research Benchmarking System, *Journal of Informetrics*, 11(2), pp 389-406, May 2017.

A. Bonaccorsi, P. Haddawy, T. Cicero, S. Hassan, The solitude of stars. An analysis of the distributed excellence model of European universities, *Journal of Informetrics*, 11(2), pp 435-454, May 2017.

A. Bonaccorsi, T. Cicero, P. Haddawy, S. Hassan, Explaining the transatlantic gap in research excellence, *Scientometrics*, 110(1), pp 217-241, Jan 2017.

S. Hassan, A. Akram and P. Haddawy, Identifying Important Citations using Contextual Information from Full Text, *Proc. ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL 2017)*, pp 1-8, June 2017. (Finalist for Vannevar Bush Best Paper Award)

P. Haddawy, S. Hassan, A. Asghar, S. Amin, A Comprehensive Examination of the Relation of Three Citation-Based Journal Metrics to Expert Judgment of Journal Quality, *Journal of Informetrics*, 10(1), pp 162-173, Feb 2016.

S. Hassan, P. Haddawy, Analyzing Knowledge Flows of Scientific Literature through Semantic Links: A Case Study in the Field of Energy. *Scientometrics*, 103(1), pp 33-46, April 2015.

S. Hassan, P. Haddawy, J. Zhu, A Bibliometric Study of the World's Research Activity in Sustainable Development and its Sub-areas using Scientific Literature. *Scientometrics*, 99(2), pp 549-579, 2014.

W. Noor, M. Dailey, P. Haddawy, Learning Predictive Choice Models for Decision Optimization. *IEEE Transactions on Knowledge and Data Engineering*, 26(8), pp 1932-1945, 2014.

D. Zhu, D. Wang, S. Hassan, P. Haddawy, Small-World Phenomenon of Keywords Network Based on Complex Network. *Scientometrics*, 97(2), pp 435-442, 2013.

H. Kazi, P. Haddawy, S. Suebnukarn, Clinical reasoning gains in medical PBL: A UMLS based tutoring system. *Journal of Intelligent Information Systems*, 41(2), pp 269-284, 2013.

S. Hassan, P. Haddawy, Measuring International Knowledge Flows and Scholarly Impact of Scientific Research. *Scientometrics*, 94(1), pp 163-179, 2013.

S. Hassan, P. Haddawy, P. Kuinkel, A. Degelsegger, C. Blasy, A bibliometric study of research activity in ASEAN relative to the EU in FP7 priority areas. *Scientometrics*, 91(3), pp 1035-1051, 2012.

H. Kazi, P. Haddawy, S. Suebnukarn, Employing UMLS for Generating Hints in a Tutoring System for Medical Problem-Based Learning. *Journal of Biomedical Informatics*, 45(3), pp 557-565, 2012.

S. Suebnukarn, P. Rhienmora, P. Haddawy, The use of cone-beam computed tomography and virtual reality simulator for pre-surgical practice in endodontic microsurgery. *International Endodontic Journal*, vol. 45, issue 7, pp 627-32, 7/2012.

P. Rhienmora, P. Haddawy, S. Suebnukarn, M.N. Dailey, Intelligent Dental Training Simulator with Objective Skill Assessment and Feedback. *Artificial Intelligence in Medicine*, 52(2): 115-121, 2011.

S. Suebnukarn, R. Hataidechadusadee, N. Suwannasri, N. Suprasert, P. Rhienmora and P. Haddawy. Access cavity preparation training using haptic virtual reality and microcomputed tomography tooth models, *International Endodontic Journal*, vol 44, issue 11, pp 983-989, Nov 2011.

P. Haddawy and S. Suebnukarn. Intelligent Clinical Training Systems. *Methods of Information in Medicine*, Issue 4, 388-389, 2010.

P. Rhienmora, P. Haddawy, P. Khanal, S. Suebnukarn & M.N. Dailey, A Virtual Reality Simulator for Teaching and Evaluating Dental Procedures. *Methods of Information in Medicine*, 49(4):396-405, 2010.

S. Suebnukarn, P. Haddawy, P. Rhienmora, K. Gajananan, Haptic Virtual Reality for Skill Acquisition in Endodontics. *Journal of Endodontics*, 36(1): 53-55, 2010.