

Piyanuch Silapachote

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Research Interests

Computer Vision, Bio-Inspired Computing, Artificial Intelligence and Machine Learning, Pattern Analysis and Recognition, Image Understanding and Signal Processing, Interdisciplinary Research, CS and Engineering Education

Professional Experience

2011 – Present Instructor, Faculty of ICT, Mahidol University

Education

- May 2011 Doctor of Philosophy in Computer Science
University of Massachusetts Amherst, USA
- May 2006 Master of Science in Computer Science
University of Massachusetts Amherst, USA
- May 2001 Bachelor of Science with Honors in Computer Science and Magna Cum Laude
Cornell University, College of Engineering, USA

Selected Honors

Best paper award, The 14th International Joint Conference on Computer Science and Software Engineering (JCSSE 2017), P. Boonyakiat and P. Silapachote, Segmentation of optic nerve head images,

Selected Research Grants

National Research Council of Thailand (NRCT), “Estimation of body size and weight in Asian elephants using image processing and machine learning,” Oct 2018 – Sept 2021, 1,474,500 THB

Selected Invited Talks and Keynote Addresses

Invited talk and workshop, Young Researcher Talent, the Zoological Park Organization under the Royal Patronage of H.M. the King, “Research methodology” and “Workshop research methodology: you can create a new project,” Sep 19-20, 2017

Invited speaker, Software Freedom Day 2016 – Bangkok, “R and Machine Learning,” Sep 17, 2016

Publication Statistics

Monographs:

Journal Articles:

Conference Papers:

Book Chapters:

Workshop Papers:

Edited Volumes:

Citations: Google Scholar: 160 with h-index of 6

Scopus: 45 (excluding self-citations) with h-index of 3

Selected Publications

A. Srisuphab, P. Silapachote, W. Tantratorn, P. Krakornkul, and P. Darote, Insect detection on an unmanned ground rover, 2018 IEEE Region 10 Annual International Conference (TENCON). Jeju, Korea, October 28-31, 2018.

P. Silapachote, A. Srisuphab, V. Sirilertworakul, and P. Anekwirotj, Spectral analysis of dynamic wind loads on trees, 2018 IEEE Region 10 Annual International Conference (TENCON). Jeju, Korea, October 28-31, 2018.

P. Silapachote, A. Srisuphab, and W. Banchongthanakit, An embedded system device to monitor farrowing, 2018 5th International Conference on Advanced Informatics: Concept Theory and Applications (ICAICTA). Krabi, Thailand, August 14-17, 2018, pp. 208-213.

P. Boonyakiat and P. Silapachote, Segmentation of optic nerve head images, The 14th International Joint Conference on Computer Science and Software Engineering (JCSSE 2017). Nakhon Si Thammarat, Thailand, July 12-14, 2017, pp. 1-5.

P. Silapachote and A. Srisuphab, Teaching and learning computational thinking through solving problems in artificial intelligence: on designing introductory engineering and computing courses, IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE 2016), Bangkok, Thailand, December 7-9, 2016.

A. Srisuphab and P. Silapachote, Artificial neural networks for gesture classification with inertial motion sensing armbands, IEEE Region 10 Conference (TENCON 2016), Marina Bay Sands, Singapore, November 22-25, 2016.

P. Silapachote, A. Srisuphab, J. Phongpawarit, S. Visetpalitpol, and S. Jirapasitchai, REDLE: A platform in the cloud for elderly fall detection and push response tracking, ECTI Transactions on Computer and Information Technology, vol. 10, no. 2, pp. 185-195, November 2016.

A. Srisuphab, P. Silapachote, J. Phongpawarit, S. Visetpalitpol, and S. Jirapasitchai, REDLE: Elderly care on clouds, The 13th International Joint Conference on Computer Science and Software Engineering (JCSSE 2016), Khon Kaen, Thailand, July 13-15, 2016, pp. 1-4.

P. Silapachote, A. Srisuphab, T. Bhunnachet, and N. Matrakool, A miniature home-based sleep monitoring device, IEEE Region 10 Conference (TENCON 2015), Macau, China, November 1-4, 2015, pp. 1-5.

P. Silapachote, A. Srisuphab, and S. Srikosamatara, A reverse engineering approach to teach biology students mathematical complexity in ecology: Interdisciplinary teaching connects mathematical literacy and outdoor practice, IEEE Intl Conf on Teaching, Assessment and Learning for Engineering (TALE 2014), Wellington, New Zealand, December 8-10, 2014.

A. Srisuphab, P. Silapachote, N. Sirilertworakul, J. Phongpawarit, K. Sutassananon, and Y. Utara, Integrated ZooEduGuide with multimedia and AR: From the largest living classrooms

to wildlife conservation awareness, IEEE Region 10 Conference (TENCON 2014), Bangkok, Thailand, October 22-25, 2014, pp. 1-4.

A. Srisuphab and P. Silapachote, How to give effective presentation in academia?, The 8th Zoo and Wildlife Conference (Fighting Extinction), Chonburi, Thailand, August 18-20, 2014, pp. 59-65.

P. Silapachote and A. Srisuphab, Gaining and maintaining student attention through competitive activities in cooperative learning: A well-received experience in an undergraduate introductory artificial intelligence course, IEEE Global Engineering Education Conference (EDUCON 2014), Istanbul, Turkey, April 3-5, 2014, 295-298.

P. Silapachote, A. Srisuphab, R. Satianrapapong, W. Kaewpijit, and N. Waragulsiwan, A context-aware system for navigation and information dissemination on android devices, IEEE Region 10 Conference (TENCON 2013), Xi'an, China, Oct 22-25, 2013.

A. Srisuphab and P. Silapachote, Toward ASEAN with a zoo self-guided system on mobile devices: a review and suggestion, The 7th Zoo and Wildlife Conference (All for animals), Bangkok, Thailand, September 17-18, 2013, 125-129. The Zoological Park Organization under the Royal Patronage of H. M. the King.

A. Srisuphab and P. Silapachote, Rule-based systems made easy with battleship games: A well-received classroom experience. Combination of activity-based and cooperative learning in a competitive environment, IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE 2013), Bali, Indonesia, August 26-29, 2013.

A. Srisuphab, P. Silapachote, T. Chaivanichanan, W. Ratanapairojkul, and W. Porncharoensub, An application for the game of Go: Automatic live Go recording and searchable Go database, 2012 IEEE Region 10 Conference (TENCON 2012), Cebu, Philippines, November 19-22, 2012, 1-6.

A. Srisuphab and P. Silapachote, Potential applications of bioacoustics in wildlife, The 6th Zoo and Wildlife Conference (Fighting Extinction), Chiang Mai, Thailand, July 18-19, 2012, 19-22.

P. Silapachote and A. Hanson, Comparisons of image features in a biologically inspired vision system, Advances in Information Technology and Applied Computing (AITAC), ISSN 2251-3418, 1, November 2012, 207-212.

P. Silapachote, F. R. Stolle, A. R. Hanson, and C. H. Pilskaln, Classification of challenging marine imagery, The 5th International Conference on Computer Vision Theory and Applications (VISAPP 2010), volume 2, Angers, France, May 17-21, 2010, 401-406.

P. Silapachote, J. Weinman, A. Hanson, R. Weiss, , and M. A. Mattar, Automatic sign detection and recognition in natural scenes, IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2005) - IEEE Workshop on Computer Vision Applications for the Visually Impaired (CVAVI 2005), San Diago, California, USA, June 25, 2005.

P. Silapachote, A. Hanson, and R. Weiss, A hierarchical approach to sign recognition, The 7th IEEE Workshop on Applications of Computer Vision (WACV 2005), Breckenridge, Colorado, USA, January 5-7, 2005, 22-28.

P. Silapachote, D. R. Karuppiah, and A. R. Hanson, Feature selection using AdaBoost for face expression recognition, The 4th IASTED International Conference Visualization, Imaging, and Image Processing (VIIP 2004), Marbella, Spain, September 6-8, 2004, 84-89.