PERSONAL DATA

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Position : Assistant Professor
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PUBLICATIONS SUMMARY

8	1
International Journal	International. Proceedings

Total Publications: 9

EDUCATION

Ph.D. Degree	2014 – 2017	Ph.D. in Computer Science, Ecole doctorale Sciences physiques pour l'ingénieur et microtechniques, Université Bourgogne Franche-Comté, Besançon, France
Master Degree	2008 – 2010	M.Sc. in Bioinformatics, School of Bioresources and Technology and School of Information Technology, King Mongkut's University of Technology Thonburi, Thailand.
Bachelor Degree	2003 – 2007	B.Sc. in Information Technology, Department of Information Technology, Faculty of Technology and Environment, Prince of Songkla University - Phuket Campus, Thailand.

RESEARCH INTERESTS

Bioinfomatics

Business Intelligence

Data Science

RESEARCH PROJECTS

Bioinfomatics analysis of the global outbreak of *Pseudomonas aeruginosa* clone ST235

panISa: a software to search insertion sequence (IS) on resequencing data (https://github.com/bvalot/panISa)

TEACHING

- Business Intelligence (ปัญญาทางธุรกิจ)
- Data Visualization (การสร้างภาพนามธรรมข้อมูล)
- Introduction to Computer Programming (การเขียนโปรแกรมคอมพิวเตอร์เบื้องต้น)
- Database Systems (ระบบฐานข้อมูล)
- Database System for Software Engineering (ระบบฐานข้อมูลสำหรับวิศวกรรมซอฟต์แวร์)
- Data Structures and Algorithms (โครงสร้างข้อมูลและอัลกอริทึม)
- Data Mining (เหมืองข้อมูล)
- Data Warehousing and Data Mining (คลังข้อมูลและเหมืองข้อมูล)
- Information Retrieval (การค้นคืนสารสนเทศ)
- Organization and Management (องค์กรและการจัดการ)
- Computer and Internet Technology (คอมพิวเตอร์และเทคโนโลยีอินเทอร์เน็ต)

INTERNATIONAL JOURNAL ARTICLES

N. Theera-Ampornpunt, P. Treepong, P. Jannu, and A. Sritongkul, "Sustainable Waste Management Through Deep Learning: A Knowledge Distillation Framework for Real-Time Garbage Classification," *Sustainability*, vol. 18, no. 13, Jun. 2026, Art. no. 6392, doi: 10.3390/su18136392. *https://www.mdpi.com/2071-1050/18/13/6392*

6/2026 *sustainable waste management, circular economy, recycling, garbage classification, knowledge distillation, Deep learning, convolutional neural network, edge deployment, machine vision*

N. Theera-Ampornpunt and P. Treepong, " Visual Food Ingredient Prediction Using Deep Learning with Direct F-Score Optimization," *Foods*, vol. 14, no. 24, Dec. 2025, Art. no. 4269, doi: 10.3390/foods14244269.

https://www.mdpi.com/2304-8158/14/24/4269

12/2025 *F-score optimization, loss function, Deep learning, food ingredient prediction, image classification, cost-sensitive learning*

N. Theera-Ampornpunt and P. Treepong, "KediNet: a hybrid deep learning architecture for Thai dessert recognition," IEEE Access, vol. 13, pp. 86935–86948, 2025, doi: 10.1109/ACCESS.2025.3569435.

https://ieeexplore.ieee.org/document/11002498

5/2025 *Deep learning, food recognition, image classification, dessert*

N. Theera-Ampornpunt and P. Treepong, “Thai food recognition using deep learning with cyclical learning rates,” IEEE Access, vol. 12, pp. 174204-174221, 2024, doi: 10.1109/ACCESS.2024.3503672.

https://ieeexplore.ieee.org/document/10759670

10/2024 *Deep learning, food dataset, food recognition, image classification, learning rate*

P. Treepong, N. Theera-Ampornpunt, “Early Bread Mold Detection Through Microscopic Images Using Convolutional Neural Network,” *Current Research in Food Science*, vol. 7, Aug. 2023, Art. no. 100574.

https://www.sciencedirect.com/science/article/pii/S2665927123001429

8/2023 *image classification, Microbiology, food safety, food computing*

N. Theera-Ampornpunt, P. Treepong, “Optimizing Hyperparameters for Thai Cuisine Recognition via Convolutional Neural Networks,” Traitement du Signal, vol. 40, no. 3, pp. 1187–1193, 2023.

https://iieta.org/download/file/fid/100033

6/2023 food computing, image recognition, object recognition, Thai food

P. Treepong, C. Guyeux, A. Meunier, C. Couchoud, D. Hocquet, and B. Valot, “panISa: ab initio detection of insertion sequences in bacterial genomes from short read sequence data,” *Bioinformatics*, vol. 34. pp. 3795–3800, 2018.

https://doi.org/10.1093/bioinformatics/bty479

11/2018 Mathematical & Computational Biology, Biotechnology & Applied Microbiology, Biochemical Research Methods

P. Treepong, V.N. Kos, C. Guyeux, D.S. Blanc, X. Bertrand, B. Valot, D. Hocquet, “Global emergence of the widespread Pseudomonas aeruginosa ST235 clone”, Clinical Microbiology and Infection, vol.24, no.3. pp.258–266, 2018.

https://doi.org/10.1016/j.cmi.2017.06.018

3/2018 Medicine, Infectious Diseases, Microbiology

INTERNATIONAL PROCEEDINGS

P. Treepong, S. Prom-on, J. H. Chan, A. Meechai, N.Hirankarn, “Effects of RNA Quality on Gene Expression Functional Profiles”, 14th International Annual Symposium on Computational Science and Engineering (ANSCSE14), Mae Fah Luang University, Chiang Rai, Thailand, pp. 65-70, 2010.

1/2010

AWARDS

2014 - 2017 Ph.D. scholarship from Prince of Songkla University.
2008 - 2010 Full scholarship, Master’s Degree in Bioinformatics, King Mongkut’s University of Technology Thonburi, Thailand.

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