

Van Tien Pham

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Education

- PhD in Computer Science** 11/2022 – 11/2025
Université de Toulon, France
Thesis: Deep neural network compression using pruning and low-rank approximations.
- Master's Degree in Computer Science** 10/2019 – 12/2020
Hanoi University of Science and Technology (HUST), Vietnam
Thesis: Object detection, segmentation, and tracking from egocentric vision.
GPA: 4.0/4.0. Classification: Very good.
- Engineering Degree in Computer Science** 09/2014 – 06/2019
Hanoi University of Science and Technology (HUST), Vietnam
Programme de Formation d'Ingénieurs d'Excellence au Vietnam (PFIEV).
GPA: 3.2/4.0. Classification: Very good.

Professional Experiences

- Postdoctoral Fellow** 12/2025 – Present
Laboratoire d'Informatique et des Systèmes (LIS), UMR 7020 CNRS, France
Research on efficient multimodal foundation models for anomaly detection.
- Affiliated Researcher** 01/2026 – Present
Ton Duc Thang University, Vietnam
Research on large language models compression using low-rank approximations.
- Research Engineer** 07/2019 – 10/2022
Viettel High Technologies Industry Corporation, Viettel Group, Vietnam
Development of a driving simulator using 3D simulation engines for training applications, integrating computer vision, virtual reality, and facial recognition modules to enhance user interaction and realism.
- Research Intern** 08/2018 – 02/2021
MICA International Research Institute, HUST – CNRS/UMI-2954 – Grenoble INP, Vietnam
Research on image classification, object detection, segmentation, and tracking using neural networks.

Research Funding and Computing Grants

2026 – 2027

Principal Investigator — Grand Équipement National de Calcul Intensif (GENCI) Allocation

Project ID: AD011017604

Title: Controlled and efficient adaptation of multimodal foundation models for anomaly detection

Computing centres: Institut du Développement et des Ressources en Informatique Scientifique (IDRIS, Jean Zay); Très Grand Centre de Calcul (TGCC, Joliot-Curie); Centre Informatique National de l'Enseignement Supérieur (CINES, Adastra)

Computing resources: 50 000 GPU hours (A100/V100), ~21 565 € equivalent.

2023 – 2025

Project Member — GENCI Allocation

Project ID: AD011014497

Title: Méthodes tensorielles pour la compression et l'apprentissage des réseaux de neurones profonds

Computing centres: IDRIS (Jean Zay); TGCC (Joliot-Curie); CINES (Adastra)

Computing resources: 150 000 GPU hours (A100/V100), ~64 695 € equivalent.

Publications

Journals

- [J5] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Coupled tensor decomposition for compact network representation**, IEEE Transactions on Neural Networks and Learning Systems, vol. 37, no. 2, pp. 617-631, February 2026.
- [J4] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Singular values-driven automated filter pruning**, Neural Networks, vol. 192, p. 107857, December 2025.
- [J3] Neriman Tokcan*, Shakir Showkat Sofi*, Van Tien Pham*, Clémence Prévost*, Sofiane Kharbech*, Baptiste Magnier, Thanh Phuong Nguyen, Yassine Zniyed, Lieven De Lathauwer, **Tensor decompositions for signal processing: theory, advances, and applications**, Signal Processing, vol. 238, p. 110191, January 2026. *These authors contributed equally to this work as co-first authors.
- [J2] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Enhanced network compression through tensor decompositions and pruning**, IEEE Transactions on Neural Networks and Learning Systems, vol. 36, no. 3, pp. 4358–4370, March 2025.
- [J1] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Efficient tensor decomposition-based filter pruning**, Neural Networks, vol. 178, p. 106393, October 2024.

Preprints

- [P1] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Matrix-valued function decoupling and application to neural network compression**, Under review, 2025.

Conferences

- [C6] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Hybrid network compression through tensor decompositions and pruning**, 32nd European Signal Processing Conference (EU-SIPCO), Lyon, France, pp. 1052–1056, August 2024.
- [C5] Van Tien Pham, Yassine Zniyed, Thanh Phuong Nguyen, **Élagage efficace des filtres basé sur les décompositions tensorielles**, XXIXème Colloque Francophone de Traitement du Signal et des Images (GRETSI), Grenoble, France, pp. 937-940, August 2023.
- [C4] Van Tien Pham, Thanh Phuong Nguyen, **Identification and localization of COVID-19 abnormalities on chest radiographs**, The International Conference on Artificial Intelligence and Computer Vision, pp. 251-261, 2023.
- [C3] Van Tien Pham, Cong Minh Tran, Stanley Zheng, Tri Minh Vu, Shantanu Nath, **Chest X-ray abnormalities localization via ensemble of CNNs**, International Conference on Advanced Technologies for Communications, 2021.
- [C2] Van Tien Pham, T.H. Tran, H. Vu, **Detection and tracking hand from FPV: benchmarks and challenges on rehabilitation exercises dataset**, IEEE International Conference on Computing and Communication Technologies (RIVF), 2021.
- [C1] Van Tien Pham, Thi Lan Le, Thanh Hai Tran, Thanh Phuong Nguyen, **Hand detection and segmentation using multimodal information from Kinect**, IEEE International Conference on Multimedia Analysis and Pattern Recognition (MAPR), 2020.

Seminars

- [S2] **Coupled tensor decomposition for compact network representation**, Journées Apprentissage Signal Image du LIS, Châteauneuf-le-Rouge, France, November 2025.
- [S1] **Hybrid network compression through tensor decompositions and pruning**, Journées Apprentissage Signal Image du LIS, Aix-en-Provence, France, June 2024.

Reviewing Activities

Journal Reviewer:

IEEE Transactions on Pattern Analysis and Machine Intelligence, Expert Systems with Applications, Neural Networks, Neurocomputing, Engineering Applications of Artificial Intelligence, Quantum Machine Intelligence, Frontiers in Artificial Intelligence, Mathematics, Electronics, Applied Sciences, The Journal of Supercomputing, Scientific Reports, Signal, Image and Video Processing, njp Heritage Science, Journal of King Saud University Computer and Information Sciences.

Conference Reviewer:

International Conference on Learning Representations (ICLR), Conference on Computer Vision and Pattern Recognition (CVPR), International Conference on Machine Learning (ICML), International Conference on Artificial Intelligence and Statistics (AISTATS), International Joint Conference on Neural Networks (IJCNN), International Conference on Multimodal Interaction (ICMI), European Signal Processing Conference (EUSIPCO), Groupe de Recherche et d'Études de Traitement du Signal et des Images (GRETSI).

Honors

2021: Best Paper Runner-Up Award, IEEE International Conference on Computing and Communication Technologies (RIVF)

2020: First-Class Honours, Master's Degree, Hanoi University of Science and Technology