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Education

2011-2014	**Ph.D.**, Computer Engineering, Kyung Hee University, Korea
2005-2007	**M.Eng.**, Electronics Engineering, Ho Chi Minh City University of Technology, Vietnam
2000-2005	**B.Eng.** Electronics and Telecommunications Engineering, Ho Chi Minh City University of Technology, Vietnam

Research Experience

2022–Present	Lecturer – Researcher, FPT University, Vietnam
2017–2022	Vice Dean, School of Graduate Studies, Ton Duc Thang University, Vietnam
2015–2017	Head of Electronics – Telecommunications Department, Faculty of Electrical and Electronics Engineering, Ton Duc Thang University, Vietnam
2011–2014	Research Assistant and Post-doctoral Researcher, Department of Computer Engineering, Kyung Hee University, Korea
2005–2008	Senior Telecom Engineer – Team Leader (Japanese Customer Project), TMA Solutions Company, Vietnam

Awards & Honors

2006	DAAD Surplace scholarship
2005	Gold medal award of Ho Chi Minh City University of Technology for Excellent Student
2004	Scholarship award of SAMSUNG VINA Electronics Company
2001	Scholarship award of the Vietnamese Government for Excellent Student
2000	Second prize award in Physics Competition in Ho Chi Minh City

Publications

Journal Articles

J1. Nguyen, N. M., Nguyen, T. T. & Dang, D. N. M. HemoGAT: Heterogeneous Multimodal Speech Emotion Recognition with Cross-Modal Transformer and Graph Attention Network. *Advances in Electrical and Electronic Engineering*. To appear (2026).

J2. Dang, D. N. M. Enhancing IEEE 802.11ah Networks: A Spatial Multi-Channel MAC Protocol. *Advances in Electrical and Electronic Engineering* **23,** 105–116. https://doi.org/10.15598/aeee.v23i2.240513 (2025).

J3. Tinh, V. P., Khoa, T. A., Lam, P. D., Nam, N. H., Dang, D. N. M., Le, D.-D., Dang, T.-T., Nguyen, V.-L., Pham, T.-Q. & Nguyen, T.-B. SMixSL: The Smashed-Mixture Technique for Split Learning With Localizable Features. *IEEE Transactions on Emerging Topics in Computational Intelligence*, 1–13. https://doi.org/10.1109/TETCI.2024.3523698 (2025).

J4. Tran, D. T., Nguyen, N. D. H., Pham, T. T., Tran, P.-N., Vu, T.-D. T., Nguyen, C. T., Dang-Ngoc, H. & Dang, D. N. M. SwinTExCo: Exemplar-based Video Colorization using Swin Transformer. *Expert Systems with Applications* **260,** 125437. https://doi.org/10.1016/J.ESWA.2024.125437 (2025).

J5. Khoa, T. A., Dang, T. N., Phuc, T. V., Hoang, N. N., Dang, D. N. M., Hai, S. H. & Duc, L. P. Safety Is Our Friend: A Federated Learning Framework Toward Driver's State and Behavior Detection. *IEEE Transactions on Computational Social Systems* **11,** 2340–2358. https://doi.org/10.1109/TCSS.2023.3273727 (2024).

J6. Tinh, V. P., Son, H. H., Dang, D. N. M., Nam, N. H., Le, D.-D., Nguyen, T.-B., Pham, T.-Q., Nguyen, V.-L., Huynh, D.-T. & Khoa, T. A. CroSSHeteroFL: Cross-Stratified Sampling Composition-Fitting to Federated Learning for Heterogeneous Clients. *IEEE Access* **12,** 148011–148025. https://doi.org/10.1109/ACCESS.2024.3475737 (2024).

J7. Anh-Tuan, T., Pham, N. T., Huynh, V. V. & Dang, D. N. M. Stabilizing and Enhancing Frequency Control of Power System Using Decentralized Observer-Based Sliding Mode Control. *Journal of Control, Automation and Electrical Systems* **34,** 541–553. https://doi.org/10.1007/S40313-022-00979-Y (2023).

J8. Pham, N. T., Dang, D. N. M., Nguyen, N. D., Nguyen, T. T., Nguyen, H., Manavalan, B., Lim, C. P. & Nguyen, S. D. Hybrid data augmentation and deep attention-based dilated convolutional-recurrent neural networks for speech emotion recognition. *Expert Systems with Applications* **230,** 120608. https://doi.org/10.1016/J.ESWA.2023.120608 (2023).

J9. Pham, N. T., Nguyen, S. D., Nguyen, V. S. T., Pham, B. N. H. & Dang, D. N. M. Speech emotion recognition using overlapping sliding window and Shapley additive explainable deep neural network. *Journal of Information and Telecommunication* **7,** 317–335. https://doi.org/10.1080/24751839.2023.2187278 (2023).

J10. Son, H. H., Tinh, V. P., Dang, D. N. M., Duyen, B. T., Le, D.-D., Dang, T.-T., Nguyen, Q.-H., Pham, T.-Q., Nguyen, V.-L., Khoa, T. A. & Nam, N. H. A novel solution for energy-saving and lifetime-maximizing of LoRa wireless mesh networks. *Journal of Information and Telecommunication* **8,** 1–17. https://doi.org/10.1080/24751839.2023.2235114 (2023).

J11. Son, H. H., Tran, A. K., Doan, T. P., Tran, H. K., Dang, D. N. M. & Nguyen, H. N. Design and implementation of a VoIP PBX integrated Vietnamese virtual assistant: a case study. *Journal of Information and Telecommunication* **7,** 201–226. https://doi.org/10.1080/24751839.2023.2183631 (2023).

J12. Khoa, T. A., Minh, N. Q., Son, H. H., Khoa, C. N. D., Tan, D. N., VanDung, N., Nam, N. H., Dang, D. N. M. & Tin, N. T. Wireless sensor networks and machine learning meet climate change prediction. *International Journal of Communication Systems* **34,** 1–18. https://doi.org/10.1002/DAC.4687 (2021).

J13. Dang, D. N. M., Ngo, Q. T. & Le-Trung, Q. An adaptive and cooperative MAC protocol in vehicular ad hoc network: design and performance analysis. *International Journal of Ad Hoc and Ubiquitous Computing* **35,** 191–204. https://doi.org/10.1504/IJAHUC.2020.10033621 (2020).

J14. Khoa, T. A., Nhu, L. M. B., Son, H. H., Trong, N. M., Phuc, C. H., Phuong, N. T. H., Dung, N. V., Nam, N. H., Chau, D. S. T. & Dang, D. N. M. Designing Efficient Smart Home Management with IoT Smart Lighting: A Case Study. *Wireless Communications and Mobile Computing* **2020,** 1–18. https://doi.org/10.1155/2020/8896637 (2020).

J15. Ngo, Q. T., Dang, D. N. M. & Le-Trung, Q. Extreme Power Saving Directional MAC Protocol in IEEE 802.11ah Networks. *IET Networks* **9,** 180–188. https://doi.org/10.1049/iet-net.2019.0176 (2020).

J16. Pham, N. T., Dang, D. N. M. & Nguyen, S. D. A Method upon Deep Learning for Speech Emotion Recognition. *Journal of Advanced Engineering and Computation* **4,** 273–285. https://doi.org/10.25073/JAEC.202044.311 (2020).

J17. Tran, A. K., Phuc, C. H., Lam, P. D., Nhu, L. M. B., Trong, N. M., Phuong, N. T. H., Dung, N. V., Tan-Y, N., Nguyen, H. N. & Dang, D. N. M. Waste Management System Using IoT-Based Machine Learning in University. *Wireless Communications and Mobile Computing* **2020,** 1–13. https://doi.org/10.1155/2020/6138637 (2020).

J18. Ngo, Q. T., Dang, D. N. M. & Tran, K. A. Flying Height Optimization for Unmanned Aerial Vehicles in Cellular - Flying Adhoc Network. *Journal of Advanced Engineering and Computation* **2,** 216–223. https://doi.org/10.25073/JAEC.201824.210 (2018).

J19. Dang, D. N. M., Nguyen, V., Le, T. H. T., Hong, C. S. & Choe, J. An efficient multi-channel MAC protocol for wireless ad hoc networks. *Ad Hoc Networks* **44,** 46–57. https://doi.org/10.1016/j.adhoc.2016.02.013 (2016).

J20. Oo, T. Z., Tran, N. H., Dang, D. N. M., Han, Z., Le, L. B. & Hong, C. S. OMF-MAC: An Opportunistic Matched Filter-Based MAC in Cognitive Radio Networks. *IEEE Transactions on Vehicular Technology* **65,** 2544–2559. https://doi.org/10.1109/tvt.2015.2415033 (2016).

J21. Dang, D. N. M., Hong, C. S. & Lee, S. A hybrid multi-channel MAC protocol for wireless ad hoc networks. *Wireless Networks* **21,** 387–404. https://doi.org/10.1007/S11276-014-0789-8 (2015).

J22. Vo, P. L., Dang, D. N. M., Lee, S., Hong, C. S. & Le, T.-Q. A coalitional game approach for fractional cooperative caching in content-oriented networks. *Computer Networks* **77,** 144–152. https://doi.org/10.1016/j.comnet.2014.12.005 (2015).

J23. Dang, D. N. M., Hong, C. S., Lee, S. & Huh, E.-N. An Efficient and Reliable MAC in VANETs. *IEEE Communications Letters* **18,** 616–619. https://doi.org/10.1109/LCOMM.2014.030114.132504 (2014).

J24. Dang, D. N. M., Hong, C. S., Lee, S. & Lee, J. A SINR-based MAC protocol for wireless ad hoc networks. *IEEE Communications Letters* **16,** 2016–2019. https://doi.org/10.1109/LCOMM.2012.111412.121916 (2012).

Peer-reviewed Conference Proceedings

C1. Hoang, D.-H., Nguyen, D. T., Tran, Q. H., Nguyen, T. T., Nguyen, N. M. & Dang, D. N. M. *YOLO-Powered Traffic Sign Detection and OpenStreetMap Integration for Intelligent Navigation* in *2025 Asia-Pacific Network Operations and Management Symposium (APNOMS)* To appear (Kaohsiung, Taiwan, Sept. 2025).

C2. Nguyen, N. M., Le, T. T., Nguyen, T. T., Phan, D. T., Tran, A. K. & Dang, D. N. M. *CemoBAM: Advancing Multimodal Emotion Recognition through Heterogeneous Graph Networks and Cross-Modal Attention Mechanisms* in *2025 Asia-Pacific Network Operations and Management Symposium (APNOMS)* To appear (Kaohsiung, Taiwan, Sept. 2025).

C3. Phan, B. H. T., Vu, H. H. S., Nguyen, X. L. B., Huynh, T. D., Vu, D. T. T. & Dang, D. N. M. *LLM-Guided Multi-Object Tracking: Enhancing Retail Insights with TempRMOT* in *6th International Conference on Machine Learning and Human-Computer Interaction (MLHMI)* (Kawasaki, Japan, Mar. 2025), 69–73. https://doi.org/10.1109/MLHMI66056.2025.00018.

C4. Phan, D. T., Nguyen, N. M., Nguyen, K. P., Pham, T. & Dang, D. N. M. *ALMUS: Enhancing Active Learning for Object Detection with Metric-Based Uncertainty Sampling* in *2025 Asia-Pacific Network Operations and Management Symposium (APNOMS)* To appear (Kaohsiung, Taiwan, Sept. 2025).

C5. Phan, N. V. H., Nguyen, M.-K., Nguyen, T. T., Pham, T. T., Tran, P.-N. & Dang, D. N. M. *Mask CoMER: Enhancing Handwritten Mathematical Expression Recognition with Masked Language Pretraining and Regularization* in *International Conference on Document Analysis and Recognition (ICDAR)* (Wuhan, Hubei, China, Sept. 2025).

C6. Tran, N. P. L., Nguyen, K. L., Dang-Ngoc, H., Kim, L. K. & Dang, D. N. M. *Towards Scalable EEG-Based Emotion Recognition for Mental Health: A Multi-Task Learning Approach* in *2025 International Symposium on Electrical and Electronics Engineering (ISEE)* To appear (Ho Chi Minh City, Vietnam, Oct. 2025).

C7. Tran, P.-N., Dang, D. N. M., Huh, E.-N. & Hong, C. S. *Additive Angular Margin Loss for Federated Learning in Image Classification* in *2025 International Conference on Information Networking (ICOIN)* (Jan. 2025), 274–279. https://doi.org/10.1109/ICOIN63865.2025.10993113.

C8. Vo, D. T., Nguyen, X. T., Dang-Ngoc, H., Vo, Q. S. & Dang, D. N. M. *Enhancing Urban Traffic Safety with VANET: A Simulation-Based Multi-Scenario Alert System* in *2025 International Symposium on Electrical and Electronics Engineering (ISEE)* To appear (Ho Chi Minh City, Vietnam, Oct. 2025).

C9. Dang, D. N. M., Tran, A. K. & Pham, N. T. *Priority-Based Uplink Raw Slot Utilization in the IEEE 802.11ah Networks* in *AETA 2022—Recent Advances in Electrical Engineering and Related Sciences: Theory and Application* (Springer Nature Singapore, Singapore, Mar. 2024), 143–151. ISBN: 978-981-99-8703-0. https://doi.org/10.1007/978-981-99-8703-0_12.

C10. Dang Hai, B., Nguyen, H. D., Vo, T. N., Tran, P.-N., Nguyen, C. T. & Dang, D. N. M. *Performance Comparison in Traffic Sign Recognition Using Deep Learning* in *Industrial Networks and Intelligent Systems* (Springer Nature Switzerland, Cham, Aug. 2024), 122–138. ISBN: 978-3-031-67357-3. https://doi.org/10.1007/978-3-031-67357-3_9.

C11. Huynh, T. M., Nguyen, D. L., Nguyen, T. T., Vu, T.-D. T., Dang-Ngoc, H. & Dang, D. N. M. *CLIP-Prefix for Image Captioning and an Experiment on Blind Image Guessing* in *Industrial Networks and Intelligent Systems* (Springer Nature Switzerland, Cham, Aug. 2024), 189–203. ISBN: 978-3-031-67357-3. https://doi.org/10.1007/978-3-031-67357-3_14.

C12. Le, C. H., Ly, H. P., Nguyen, T. D., Dang-Ngoc, H., Vu, T.-D. T. & Dang, D. N. M. *Deep Learning Based Attendance Check System at FPT University* in *Proceedings of the 2024 9th International Conference on Intelligent Information Technology (ICIIT)* (Association for Computing Machinery, New York, NY, USA, Feb. 2024), 272–281. ISBN: 9798400716713. https://doi.org/10.1145/3654522.3654584.

C13. Le, Q. B., Tuan Trinh, K., Nguyen Dinh, H. S., Tran, P.-N., Nguyen, C. T. & Dang, D. N. M. *MERSA: Multimodal Emotion Recognition with Self-Align Embedding* in *2024 International Conference on Information Networking (ICOIN)* (Jan. 2024), 500–505. https://doi.org/10.1109/ICOIN59985.2024.10572116.

C14. Le, T. T., Pham, N. T., Tran, P.-N. & Dang, D. N. M. *Federated Learning with U-Net for Brain Tumor Segmentation: Impact of Client Numbers and Data Distribution* in *2024 15th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2024), 2048–2053. https://doi.org/10.1109/ICTC62082.2024.10826674.

C15. Nguyen, D. T., Phan, M. K., Tran, P.-N. & Dang, D. N. M. *Vietnamese Traffic Sign Recognition Using Deep Learning* in *Proceedings of the 2024 9th International Conference on Intelligent Information Technology (ICIIT)* (Association for Computing Machinery, New York, NY, USA, Feb. 2024), 30–35. ISBN: 9798400716713. https://doi.org/10.1145/3654522.3654528.

C16. Nguyen, N. M., Nguyen, T. T., Nguyen, H. H., Tran, P.-N. & Dang, D. N. M. *Voice-Based Age and Gender Recognition: A Comparative Study of LSTM, RezoNet and Hybrid CNNs-BiLSTM Architecture* in *2024 15th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2024), 191–196. https://doi.org/10.1109/ICTC62082.2024.10827387.

C17. Nguyen, T. M., Tran, P.-N. & Dang, D. N. M. *Enhancing Speech Emotion Recognition Through Knowledge Distillation* in *2024 15th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2024), 197–202. https://doi.org/10.1109/ICTC62082.2024.10826904.

C18. Pham, N. T., Tran, A.-T., Pham, B. N. H., Dang-Ngoc, H., Nguyen, S. D. & Dang, D. N. M. *Speech Emotion Recognition: A Brief Review of Multi-Modal Multi-Task Learning Approaches* in *AETA 2022—Recent Advances in Electrical Engineering and Related Sciences: Theory and Application* (Springer Nature Singapore, Singapore, Mar. 2024), 605–615. ISBN: 978-981-99-8703-0. https://doi.org/10.1007/978-981-99-8703-0_50.

C19. Phan, D. K., Tran, P.-N., Pham, N. T., Le, T. H. T. & Dang, D. N. M. *Innovative Multi-Modal Control for Surveillance Spider Robot: An Integration of Voice and Hand Gesture Recognition* in *Proceedings of the 2024 9th International Conference on Intelligent Information Technology (ICIIT)* (Association for Computing Machinery, New York, NY, USA, Feb. 2024), 141–148. ISBN: 9798400716713. https://doi.org/10.1145/3654522.3654544.

C20. Phan, D. T., Tran, P.-N. & Dang, D. N. M. *Improving Face Attendance Checking System with Ensemble Learning* in *2024 RIVF International Conference on Computing and Communication Technologies (RIVF)* (Oct. 2024), 250–254. https://doi.org/10.1109/RIVF64335.2024.11009085.

C21. Phan, N. V. H., Le, T. T., Phan, T. P., Le, T. T., Tran, P.-N., Pham, N. T. & Dang, D. N. M. *Deep Learning-Based Automated Cashier System for Bakeries* in *Proceedings of the 2024 9th International Conference on Intelligent Information Technology (ICIIT)* (Association for Computing Machinery, New York, NY, USA, Feb. 2024), 94–100. ISBN: 9798400716713. https://doi.org/10.1145/3654522.3654538.

C22. Tran, P.-N., Pham, N. T., Phan, N. V. H., Phan, D. T., Nguyen, C. T. & Dang, D. N. M. *Towards Real-Time Vietnamese Traffic Sign Recognition on Embedded Systems* in *2024 15th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2024), 1–6. https://doi.org/10.1109/ICTC62082.2024.10827558.

C23. Dang, D. N. M. & Pham, N. T. *Uplink Registration-Based MAC Protocol for IEEE 802.11ah Networks* in *Proceedings of the 2023 8th International Conference on Intelligent Information Technology* (ACM, Feb. 2023), 33–37. https://doi.org/10.1145/3591569.3591575.

C24. Hoang, D.-H., Tran, A.-K., Dang, D. N. M., Tran, P.-N., Dang-Ngoc, H. & Nguyen, C. T. *RBBA: ResNet - BERT - Bahdanau Attention for Image Caption Generator* in *2023 14th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2023), 430–435. https://doi.org/10.1109/ICTC58733.2023.10392496.

C25. Pham, N. T., Dang, D. N. M., Pham, B. N. H. & Nguyen, S. D. *SERVER: Multi-Modal Speech Emotion Recognition Using Transformer-Based and Vision-Based Embeddings* in *Proceedings of the 2023 8th International Conference on Intelligent Information Technology* (ACM, Feb. 2023), 234–238. https://doi.org/10.1145/3591569.3591610.

C26. Pham, N. T., Phan, L. T., Dang, D. N. M. & Manavalan, B. *SER-Fuse: An Emotion Recognition Application Utilizing Multi-Modal, Multi-Lingual, and Multi-Feature Fusion* in *Proceedings of the 12th International Symposium on Information and Communication Technology (SOICT)* (Association for Computing Machinery, New York, NY, USA, Dec. 2023), 870–877. ISBN: 9798400708916. https://doi.org/10.1145/3628797.3628887.

C27. Tran, D. T., Tran, P.-N., Nguyen, N. D. H., Vu, T.-D. T., Pham, T. T. & Dang, D. N. M. *Vitexco: Exemplar-Based Video Colorization Using Vision Transformer* in *2023 14th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2023), 59–64. https://doi.org/10.1109/ICTC58733.2023.10393505.

C28. Tran, P.-N., Vu, T.-D. T., Dang, D. N. M., Pham, N. T. & Tran, A.-K. *Multi-Modal Speech Emotion Recognition: Improving Accuracy Through Fusion of VGGish and BERT Features with Multi-Head Attention* in *Industrial Networks and Intelligent Systems* (Springer Nature Switzerland, Cham, Sept. 2023), 148–158. ISBN: 978-3-031-47359-3. https://doi.org/10.1007/978-3-031-47359-3_11.

C29. Tran, P.-N., Vu, T.-D. T., Pham, N. T., Dang-Ngoc, H. & Dang, D. N. M. *Comparative Analysis of Multi-Loss Functions for Enhanced Multi-Modal Speech Emotion Recognition* in *2023 14th International Conference on Information and Communication Technology Convergence (ICTC)* (Oct. 2023), 425–429. https://doi.org/10.1109/ICTC58733.2023.10392928.

C30. Vo, T. P., Nguyen, V. A., Nguyen, X. B. L., Dang, D. N. M. & Tran, A. K. *Performance Analysis of Distributed Learning in Edge Computing on Handwritten Digits Dataset* in *Industrial Networks and Intelligent Systems* (Springer Nature Switzerland, Cham, Sept. 2023), 159–169. ISBN: 978-3-031-47359-3. https://doi.org/10.1007/978-3-031-47359-3_12.

C31. Dang, D. N. M., Tran, A. K., Pham, N. T., Tran, K. D. & Dang, H. N. *Safety Message Broadcast Reliability Enhancement MAC Protocol in VANETs* in *2022 IEEE 9th International Conference on Communications and Electronics (ICCE)* (July 2022), 69–74. https://doi.org/10.1109/ICCE55644.2022.9852052.

C32. Dang, D. N. M., Tran, V. T., Nguyen, H. L., Pham, N. T., Tran, A. K. & Dang, N.-H. *Space-Frequency Diversity Based MAC Protocol for IEEE 802.11ah Networks* in *2022 International Conference on Advanced Technologies for Communications (ATC)* (IEEE, Oct. 2022), 159–164. https://doi.org/10.1109/ATC55345.2022.9943042.

C33. Nguyen, S. C., Hoang, M., Tinh, V. P. & Dang, D. N. M. *Efficient Resource Allocation Using Federated Learning in Cellular Networks* in *Proceedings of the 3rd ACM Workshop on Intelligent Cross-Data Analysis and Retrieval* (ACM, June 2022), 70–73. https://doi.org/10.1145/3512731.3534214.

C34. Pham, N. T., Pham, V. D., Nguyen-Van, Q., Nguyen, B. H., Dang, D. N. M. & Nguyen, S. D. *Vietnamese Scene Text Detection and Recognition Using Deep Learning: An Empirical Study* in *Proceedings of 2022 6th International Conference on Green Technology and Sustainable Development (GTSD)* (July 2022), 213–218. https://doi.org/10.1109/GTSD54989.2022.9989248.

C35. Pham, V. D., Nguyen, L. Q., Pham, N. T., Nguyen, B. H., Dang, D. N. M. & Nguyen, S. D. *Key Information Extraction from Mobile-Captured Vietnamese Receipt Images Using Graph Neural Networks Approach* in *Proceedings of 2022 6th International Conference on Green Technology and Sustainable Development (GTSD)* (July 2022), 232–237. https://doi.org/10.1109/GTSD54989.2022.9989111.

C36. Tran, A. K., Nguyen, M. T., Le, M. B. N., Cao, H. P., Nguyen, V. D. & Dang, D. N. M. *Design of a Soil Moisture Sensor for Application in a Smart Watering System* in *2021 IEEE Sensors Applications Symposium (SAS)* (IEEE, Aug. 2021), 1–6. https://doi.org/10.1109/SAS51076.2021.9530105.

C37. Tran, A. K., Truong, D. N. T. & Dang, D. N. M. *Cross-Modal Deep Neural Networks Based Smartphone Authentication for Intelligent Things System* in *Proceedings of the 2021 ACM Workshop on Intelligent Cross-Data Analysis and Retrieval* (ACM, Aug. 2021), 48–51. https://doi.org/10.1145/3463944.3469101.

C38. Bao, P. C., Huong, D. V. X., Dang, D. N. M., Le, Q. T. & Lam, D. K. *High Throughput and Low Complexity Implementation for Uplink Scheme of 5G Technology* in *2019 26th International Conference on Telecommunications (ICT)* (IEEE, Apr. 2019), 304–308. https://doi.org/10.1109/ICT.2019.8798862.

C39. Ngo, Q. T., Dang, D. N. M., Le-Trung, Q. & Lam, D. K. *A Novel Directional MAC in Restricted Access Window for IEEE 802.11ah Networks* in *2019 26th International Conference on Telecommunications (ICT)* (IEEE, Apr. 2019), 167–171. https://doi.org/10.1109/ICT.2019.8798775.

C40. Ngo, Q. T. & Dang, D. N. M. *Enhanced Self-Sorting Based MAC Protocol for Vehicular Ad-Hoc Networks* in *Lecture Notes in Electrical Engineering* **465** (Springer, Cham, Nov. 2018), 155–162. https://doi.org/10.1007/978-3-319-69814-4_15.

C41. Dang, D. N. M., Ngo, Q. T., Dang, H. N. & Vo, P. L. *Analytical Study of the IEEE 1609.4 MAC in Vehicular Ad Hoc Networks* in *Lecture Notes in Electrical Engineering* (Springer International Publishing, Nov. 2017), 145–154. https://doi.org/10.1007/978-3-319-69814-4_14.

C42. Dang, D. N. M., Ngo, Q. T., Dang, H. N. & Hong, C. S. *A Multi-Channel MAC Protocol with Power Control for Wireless Ad Hoc Networks* in *AETA 2015: Recent Advances in Electrical Engineering and Related Sciences* (Springer International Publishing, Jan. 2016), 63–73. https://doi.org/10.1007/978-3-319-27247-4_6.

C43. Dang, D. N. M., Ngo, Q. T., Dang, H. N., Vo, P. L. & Hong, C. S. *Directional Multi-Channel MAC for VANETs* in *AETA 2016: Recent Advances in Electrical Engineering and Related Sciences: Theory and Application* **415** (Springer, Cham, Dec. 2016), 803–812. https://doi.org/10.1007/978-3-319-50904-4_81.

C44. Ngo, Q. T. & Dang, D. N. M. *A Dynamic Cooperative MAC Protocol for Vehicular Ad-Hoc Networks* in *AETA 2016: Recent Advances in Electrical Engineering and Related Sciences* (Springer International Publishing, Dec. 2016), 780–790. https://doi.org/10.1007/978-3-319-50904-4_79.

C45. Vo, P. L., Nguyen, L. V., Le, T.-A. & Dang, D. N. M. *A QoE-Based Caching Algorithm for HTTP Adaptive Streaming Contents in Radio Access Networks* in *2016 IEEE Sixth International Conference on Communications and Electronics (ICCE)* (IEEE, July 2016), 417–422. https://doi.org/10.1109/CCE.2016.7562673.

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Book chapters

B1. Dang, D. N. M. & Hong, C. S. *Multi-channel MAC Protocols and Power Control for Wireless Ad hoc Networks* Wiley Encyclopedia of Electrical and Electronics Engineering. May 2016.

Patents

P1. Hong, C. S., Duc, D. N. M. & Nguyen, V. D. *Method and Apparatus for Transmitting and Receiving Packet* Registered with the Korean Intellectual Property Office (KIPO). May 2015. https://patents.google.com/patent/KR101526121B1/en?oq=KR101526121B1.

P2. Hong, C. S., Duc, D. N. M. & Nguyen, V. D. *Method for Transmitting Packet in Vehicle Communication Network* Registered with the Korean Intellectual Property Office (KIPO). June 2015. https://patents.google.com/patent/KR101533192B1/en?oq=KR101533192B1.

P3. Hong, C. S. & Duc, D. N. M. *Hybrid Type Multi-channel Media Access Control Protocol for 802.11* Registered with the Korean Intellectual Property Office (KIPO). Aug. 2014. https://patents.google.com/patent/KR101436699B1/en?oq=KR101436699B1.

Projects

7/2023 7/2024	-	Principal Investigator: Real-time traffic sign detection and recognition in Vietnam, DHFPT/2023/10, FPT University
4/2025 present	-	Principal Investigator: Multi-Modal Fusion in Speech Emotion Recognition, DHFPT/2025/10, FPT University
7/2025 present	-	Principal Investigator: Multi-Task Learning for Handwritten Mathematical Expression Recognition, DHFPT/2025/18, FPT University

Teaching Courses

Ton Duc Thang University

Undergrad	Engineering Analysis
Undergrad	Electronics Circuit Design
Undergrad	Digital System Design
Undergrad	Signals and Systems
Undergrad	Digital Signal Processing
Grad	Wireless Networks
Grad	Advanced Digital Signal Processing

FPT University

Undergrad	Programming Fundamentals
Undergrad	Internet of Things
Undergrad	Introduction to Computer Science

Academic Advising

Master students

2025	Le Hoang Hiep, FPT University, *Real-Time Abnormal Object Detection in Surveillance Cameras*
2025	Nguyen Cuong Truc, FPT University, *Extraction and Storage of Information from Value-Added Tax Invoices*
2023	Bui Huu Hiep, Ton Duc Thang University, *Design a spatial multi-channel MAC protocol for IEEE 802.11ah*

2023 Nguyen Tan Long, Ton Duc Thang University, *Priority-based uplink RAW slot utilization for uplink performance enhancement in IEEE 802.11ah networks*

2023 Nguyen Thanh Phong, Ton Duc Thang University, *Design an uplink registration-based MAC protocol for IEEE 802.11ah networks*

2021 Tran Van Thau, Ton Duc Thang University, *Multi-Channel MAC protocol for IEEE 802.11ah wireless networks*

2021 Pham Nhat Truong, Ton Duc Thang University, *A method upon deep learning for speech emotion recognition*

2020 Tran Khanh Duong, Ton Duc Thang University, *Enhancing the reliability of broadcasting safety message in VANETs*

2016 Ngo Tu Quynh, Ho Chi Minh City University of Science, *A Dynamic Cooperative MAC Protocol for Vehicular Ad-hoc Networks*

Academic Service

Co-General Chair

2024 International Conference on Intelligent Information Technology (ICIIT 2024)

Technical Program Committee Member

2025 RIVF International Conference on Computing and Communication Technologies (RIVF)

2025 International Conference on Advanced Technologies for Communications (ATC)

2025 FPT International Conference on Emerging Trends in Computing (FETC)

2024 RIVF International Conference on Computing and Communication Technologies (RIVF)

2024 3rd International Conference on Intelligence of Things (ICIT)

2023 RIVF International Conference on Computing and Communication Technologies (RIVF)

2023 International Symposium on Electrical and Electronics Engineering (ISEE)

2023 International Conference on Advanced Technologies for Communications (ATC)

2022 RIVF International Conference on Computing and Communication Technologies (RIVF)

2022 IEEE 9th International Conference on Communications and Electronics (ICCE)

2021 8th NAFOSTED Conference on Information and Computer Science (NICS)

2021 International Conference on Advanced Technologies for Communications (ATC)

2021 International Symposium on Electrical and Electronics Engineering (ISEE)

2020 IEEE 8th International Conference on Communications and Electronics (ICCE) (held in 2021)

2020 1st Conference on Internet of Things and Embedded Intelligence

2020 IEEE 12th International Conference on Knowledge and Systems Engineering (KSE)

2019 International Conference on Advanced Engineering – Theory and Applications

2018 IEEE 7th International Conference on Communications and Electronics (ICCE)

2018 International Conference on Advanced Engineering – Theory and Applications

2018	IEEE International Conference on Communications (ICC) – Ad-Hoc and Sensor Networking Symposium
2017	International Conference on Advanced Technologies for Communications (ATC)
2017	International Conference on Recent Advances in Signal Processing, Telecommunications & Computing (SigTelCom)
2017	International Conference on Advanced Engineering – Theory and Applications
2016	International Conference on Advanced Technologies for Communications (ATC)
2016	International Conference on Advanced Engineering – Theory and Applications
2016	3rd NAFOSTED Conference on Information and Computer Science (NICS)
2015	International Conference on Advanced Technologies for Communications (ATC)
2015	International Conference on Advanced Engineering – Theory and Applications
2015	National Conference on Electronics, Communications, and Information Technology (ECIT 2015)
2014	IEEE Wireless Communications and Networking Conference (WCNC), Track 2 (MAC and Cross-Layer Design)
2014	IEEE World Forum on Internet of Things (WF-IoT)
2014	International Conference on Green and Human Information Technology
2013	International Conference on Advanced Technologies for Communications (ATC)
2013	IEEE Wireless Communications and Networking Conference (WCNC) – MAC Track
2013	International Conference on Information Networking (ICOIN)
2011	International Conference on ICT Convergence (ICTC)

Journal Reviewer

Biomedical Signal Processing and Control
China Communications
Computer Communications
Computer Methods in Biomechanics and Biomedical Engineering
Electrica
Entropy
Expert Systems with Applications
Future Generation Computer Systems
IEEE Access
IEEE Communications Letters
IEEE Internet of Things Journal
IEEE Sensors Journal
IEEE Transactions on Affective Computing
IEEE Transactions on Big Data
IEEE Transactions on Cognitive Communications and Networking
IEEE Transactions on Industrial Informatics
IEEE Transactions on Intelligent Transportation Systems
IEEE Transactions on Microwave Theory and Techniques
IEEE Transactions on Vehicular Technology
IEEE Transactions on Wireless Communications
IEEE Wireless Communications Letters
IET Communications
IET Networks

International Journal of Communication Systems
International Journal of Parallel, Emergent and Distributed Systems
Journal of Information and Telecommunication
Microprocessors and Microsystems
Pervasive and Mobile Computing
Speech Communication
Speech Communications
Vehicular Communications

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