

NHAT TRUONG PHAM, PH.D. STUDENT

Room 62105, Biotechnology and Bioengineering Building 2, Seobu-ro, Jagan-gu, Suwon-si, Gyeonggi-do, 16419, Republic of Korea
truongpham96@skku.edu | Personal Website | Google Scholar | ORCID | ResearchGate | ResearcherID | ScopusID

EDUCATION

- 2023 – Now: Ph.D., Integrative Biotechnology, Sungkyunkwan University, Republic of Korea
- 2019 – 2021: M.E., Automation and Control Engineering, Ton Duc Thang University, Vietnam
- 2014 – 2019: B.E., Electronics and Telecommunication Engineering, Ton Duc Thang University, Vietnam

RESEARCH INTERESTS

Artificial Intelligence, Computational Intelligence, Deep Learning, Machine Learning, Signal Processing, XAI & Optimization, and their applications in the fields of Affective Computing, Audio & Speech Processing, Bioinformatics, Computational Biology & Medicine, Computer-aided Drug Design, Protein Design, and Protein Functional & Structural Prediction

RESEARCH AND WORK EXPERIENCE

Computational Biology and Bioinformatics Laboratory, Department of Integrative Biotechnology, College of Biotechnology and Bioengineering, Sungkyunkwan University	Republic of Korea
<i>Graduate Research Assistant</i>	<i>February 2023 to present</i>
Division of Computational Mechatronics, Institute for Computational Science, Ton Duc Thang University	Vietnam
<i>Assistant Researcher</i>	<i>April 2022 to March 2023</i>
Laboratory of Biophysics, Institute for Advanced Study in Technology, Ton Duc Thang University	Vietnam
<i>Collaborator</i>	<i>October 2020 to March 2023</i>
Division of Computational Mechatronics, Institute for Computational Science, Ton Duc Thang University	Vietnam
<i>Collaborator</i>	<i>December 2019 to April 2022</i>
TMA Innovation Center, TMA Solutions	Vietnam
<i>AI R&D Engineer</i>	<i>August 2018 to November 2019</i>

TEACHING AND MENTORING EXPERIENCE

- 2022 - Successfully mentored an undergraduate in the major of Electronics and Telecommunication Engineering, Ton Duc Thang University, Vietnam
- 2020 - Successfully mentored an undergraduate in the major of Industrial Electronics - Biomedical Engineering, Ho Chi Minh City University of Technology and Education, Vietnam

HONORS, AWARDS, AND CERTIFICATES

- Certified of Participation in The VinUni-Illinois Smart Health Center Workshop 2022 (VISHC 2022) and The Pre-PhD Summer School, VinUniversity, Hanoi City, Vietnam, July 11-15, 2022
- Certified of Participation as a student in the IEEE Virtual School on "Multimodal Integration of Biomedical Data: Applications in the health sciences", January 10 - March 14, 2022
- Certified of Recognition of InnoCity Submit Selected Candidate in the Vietnam Young Initiatives - InnoCity 2021
- Certified of Incentive at the AI-Challenge (AIC-HCMC2021) held by Department of Information and Communications - HCMC, 2021
- Certified of the 3rd rank in the shared task of Automatic Image Caption Generation for Healthcare Domain in Vietnamese at The 8th International Workshop on Vietnamese Language and Speech Processing 2021 (VLSP-2021) organized by Vietnam Association for Information Processing, Association for Vietnamese Language and Speech Processing, Hanoi, Vietnam, December 18, 2021
- Certified of Incentive at the AI-Challenge (AIC-HCMC2020) held by the Department of Information and Communications - HCMC
- Certified of TOP 64 at the Reinforcement Learning Competition 2020 (RLCOMP) held by FPT Software
- Certified of Excellent in Emotion Recognition Challenge 2019 (ERC2019) held by Robotics - IoT Club, University of Science, VNU - HCM
- Certified Participated in The 20th Student Scientific Research Prize Eure'ka - 2018

SELECTED PUBLICATIONS

(Note: * is the corresponding author, † is the equal contribution. Please refer to Personal Website for more information.)

- **Nhat Truong Pham**, Rajan Rakkiyapan, Jongsun Park, Adeel Malik, and Balachandran Manavalan, "H2Opred: A Robust and Efficient Hybrid Deep Learning Model for Predicting 2'-O-Methylation Sites in Human RNA," *Briefings in Bioinformatics*, 25, bbad476, 2024. DOI: 10.1093/bib/bbad476
- **Nhat Truong Pham**, Le Thi Phan, Jimin Seo, Yeonwoo Kim, Minkyung Song, Sukchan Lee, Young-Jun Jeon, and Balachandran Manavalan, "Advancing the Accuracy of SARS-CoV-2 Phosphorylation Site Detection via Meta-Learning Approach," *Briefings in Bioinformatics*, 25(1), bbad433, 2024. DOI: 10.1093/bib/bbad433
- **Nhat Truong Pham**, Duc Ngoc Minh Dang, Ngoc Duy Nguyen, Thanh Thi Nguyen, Hai Nguyen, Balachandran Manavalan, Chee Peng Lim, and Sy Dzung Nguyen, "Hybrid data augmentation and deep attention-based dilated convolutional-recurrent neural networks for speech emotion recognition," *Expert Systems With Applications*, 230, 120608, 2023. DOI: 10.1016/j.eswa.2023.120608
- Long H. Nguyen, **Nhat Truong Pham***†, Van Huong Do, Liu Tai Nguyen, Thanh Tin Nguyen, Hai Nguyen, Ngoc Duy Nguyen, Thanh Thi Nguyen, Sy Dzung Nguyen, Asim Bhatti, and Chee Peng Lim, "Fruit-CoV: An Efficient Vision-based Framework for Speedy Detection and Diagnosis of SARS-CoV-2 Infections Through Recorded Cough Sounds," *Expert Systems with Applications*, 213(Part

C), 119212, 2022. DOI: 10.1016/j.eswa.2022.119212

- Sy Dzung Nguyen, Vu Song Thuy Nguyen, and **Nhat Truong Pham**, "Determination of the Optimal Number of Clusters: A Fuzzy-set based Method," *IEEE Transactions on Fuzzy Systems*, 30(9), 3514-3526, 2022. DOI: 10.1109/TFUZZ.2021.3118113
- Ngoc Duy Nguyen, Thanh Thi Nguyen, **Nhat Truong Pham**, Hai Nguyen, Dang Tu Nguyen, Thanh Dang Nguyen, Chee Peng Lim, Micheal Johnstone, Asim Bhatti, Douglas Creighton, and Saeid Nahavandi, "Towards Designing a Generic and Comprehensive Deep Reinforcement Learning Framework," *Applied Intelligence*, 1-22, 2022. DOI: 10.1007/s10489-022-03550-z
- T. Ngoc Han Pham, Trung Hai Nguyen, Nguyen Minh Tam, Thien Y Vu, **Nhat Truong Pham**, Nguyen Truong Huy, Binh Khanh Mai, Nguyen Thanh Tung, Minh Quan Pham, Van V. Vu, and Son Tung Ngo, "Improving ligand-ranking of AutoDock Vina by changing the empirical parameters," *Journal of Computational Chemistry*, 43(3), 160-169, 2022. DOI: 10.1002/jcc.26779

PROFESSIONAL ACTIVITIES

Reviewer

- *IEEE Access*
- *IEEE/ACM Transactions on Audio, Speech and Language Processing*
- *Arabian Journal for Science and Engineering*
- *The Journal of Supercomputing*
- *Expert Systems With Applications*
- *Biomedical Signal Processing and Control*
- *Transactions of the Institute of Measurement and Control*
- *Heliyon*
- *Computer Speech & Language*
- *Engineering Applications of Artificial Intelligence*
- *International Conference on Artificial Intelligence and Human-Computer Interaction (ArtInHCI2023)* [2023]
- *AI for Science Workshop (NeurIPS2023-AI4Science)* [2023]
- *Generative AI and Biology Workshop (GenBio@NeurIPS2023)* [2023]
- *International Joint Conference on Neural Networks (IJCNN)* [2022, 2023]

TPC Membership

- International Joint Conference on Neural Networks (IJCNN) [2023, 2024]
- International Conference on Trends in Computational and Cognitive Engineering [2023]
- International Conference on Trends in Electronics and Health Informatics [2023]

Local Committee

- The 2nd International Conference on Advanced Smart Materials and Structures (ASMaS-2023)

MEMBERSHIP

- *ACM (Graduate Student Member)*, since 2022
- *IEEE Computational Intelligence Society*, since 2022
- *IEEE (Graduate Student Member)*, since 2021

REFERENCES

Professor Balachandran Manavalan, Ph.D.

Computational Biology and Bioinformatics Laboratory, Department of Integrative Biotechnology, College of Biotechnology and Bioengineering, Sungkyunkwan University, Republic of Korea

E-mail: bala2022@skku.edu

Google Scholar: <https://scholar.google.com/citations?user=ovkenbwAAAAJ>

Lab website: <https://balalab-skku.org/>

Professor Chee Peng Lim, Ph.D.

Institute for Intelligent Systems Research and Innovation, Deakin University, Australia

E-mail: chee.lim@deakin.edu.au

Google Scholar: https://scholar.google.com/citations?user=an_4IjkAAAAJ

Professor Thanh Thi Nguyen, Ph.D.

Department of Data Science & AI, Faculty of Information Technology, Monash University, Australia

E-mail: Thanh.Nguyen9@monash.edu

Google Scholar: <https://scholar.google.com/citations?user=xr39SOWAAAAJ>

Dr. Saurav Mallik, Ph.D.

Department of Pharmacology and Toxicology, The University of Arizona, USA

Department of Environmental Health, Harvard T H Chan School of Public Health, USA

E-mails: smallik@arizona.edu; smallik@hsph.harvard.edu

Google Scholar: <https://scholar.google.com/citations?user=e-6kvkIAAAAAJ>