Ngoc Hung Nguyen

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Research Interest

Computing: Cloud/edge computing, IoT, deadline-aware task scheduling
Intelligence: Applied AI/ML for networking (deep learning, deep reinforcement/reinforcement learning)
Algorithms: Greedy, graph based-algorithms, evolutionary computing.

Education

- **Hanyang University** *09-2021 - 02-2024*
  M.Sc. in Electrical and Electronic Engineering Ansan, Korea
- **Hanoi University of Science and Technology** *09-2013 - 08-2018*
  Bachelor of Engineering Hanoi, Vietnam

Work and Academic Experience

- **VinUniversity [🌐]** *03-2024 - Present*
  Research Assistant Hanoi, Vietnam
  - Intelligent Transportation System using metaheuristics and Deep Reinforcement learning.
  - Application of AI and IoT in aquaculture.
- **FPT software [🌐]** *01-2024 - 12-2024*
  Senior Engineer AI Hanoi, Vietnam
  - TVM compiler search solution mechanism.
  - Compress AI models.
- **Hanyang University [🌐]** *09-2021 - 02-2024*
  Research Assistant Ansan, Korea
  - Topic: Wireless Communication and Mobile Edge Computing
  - Deep learning/reinforcement learning.
  - Optimization problem solution.
  - Greedy algorithms.
- **LG Electronics [🌐]** *10-2018 - 07-2021*
  Senior Embedded Engineer Hanoi, Vietnam
  - Apply the Resful interface in the head unit of Vehicles.
  - Sharpness and SFR Researcher.

Honors and Awards

- **Third-award - Student Research Prize** *Hanoi*
  Hanoi University of Science and Technology 2017-2018

Skills

- **Programming Languages:** Python, C++/C, Cuda-C++, MATLAB
- **Data Science & Machine Learning:** Pytorch, TensorFlow, Pandas, Numpy
- **Technique:** Mathematical Modeling, Numerical Methods, Optimization, Applied AI/ML (e.g., RL/DRL)
- **Languages:** Vietnamese (mother tongue), English (fluent)

Academic Services

- **Journal reviewer**: IEEE Internet of Things, IEEE Communication letter, and Computer Networks

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

Research profiles:

- Google Scholar: https://scholar.google.com/citations?user=uOr3eosAAAAJ&hl=vi&oi=ao
- ORCID: https://orcid.org/0009-0007-7363-5014
- ResearchGate: https://www.researchgate.net/profile/Nguyen-Hung-120

[S.1] **Ngoc Hung Nguyen**, Nguyen Van Thieu, Senura H. Wanasekara, Van-Dinh Nguyen, Quang-Trung Luu, Nguyen Cong Luong, and Anh Tuan Nguyen, "**Oranits: Autonomous Control and Task Allocation in ITS Integrating MEC and Open RAN using Metaheuristic and Deep Reinforcement Learning**," submitted to *IEEE Transaction on Intelligent Transportation Systems*, 2025 (in review).

[S.2] Tran Cong Dao, Nguyen Cong Luong, **Ngoc Hung Nguyen**, Xingwang Li, Dusit Niyato, and Dong In Kim (2024). **Multi-Hop Routing for IoT-Based Digital Twin: Novel Metaheuristic Approaches**. In *IEEE Internet of Things Journal*. Publisher IEEE. Status: Under-reviewing.

[J.1] **Ngoc Hung Nguyen**; Van-Dinh Nguyen; Anh Tuan Nguyen; Nguyen Van Thieu; Hoang Nam Nguyen; Symeon Chatzinotas (2024). **Deadline-Aware Joint Task Scheduling and Offloading in Mobile-Edge Computing Systems**. In *IEEE Internet of Things Journal*, pp. 33282 - 33295. Publisher IEEE. Date 07-10-2024. DOI: 10.1109/JIOT.2024.3425854

[J.2] Nguyen Van Thieu, **Ngoc Hung Nguyen**, and Ali Asghar Heidari (2024). **Feature selection using metaheuristics made easy: Open source MAFESE library in Python**. In *Future Generation Computer Systems*, pp. 340-358. DOI: https://doi.org/10.1016/j.future.2024.06.006

[J.3] Nguyen Van Thieu, **Ngoc Hung Nguyen**, Mohsen Sherif, Ahmed El-Shafie, and Ali Najah Ahmed (2024). **Integrated metaheuristic algorithms with extreme learning machine models for river streamflow prediction**. In *Scientific Reports*, Publisher Nature, pp. 340-358. DOI: https://doi.org/10.1016/j.future.2024.06.006

[T.1] Ngoc Hung Nguyen (2024). **Offloading under Hardline in Mobile Edge Computing**.

[P.1] Ngoc Hung Nguyen, Sang-Woon Jeon, and Kangyu Gao. (2023). **Job Scheduling with Deadline Constraints**. Patent Office, Patent No. 10-2023-0035648. Registration Date: 20/03/2023, Grant Date: Under-reviewing, Publication Date: Under-reviewing.

[C.1] ASenura Hansaja Wanasekara, Han Huy Dung, Ngoc Hung Nguyen and Van-Dinh Nguyen. (2024). **Lossy Compression of Multi-channel EEG and PPG Signals based on Golomb-Rice Coding with Parameter Estimation**. *ATC 2024*, Vol. XX, Issue X, pp. pending. DOI: Pending

REFERENCES

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Under-graduate research advisor