ĐẶNG HOÀNG HIỀN

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Education	**Ho Chi Minh University of Science (HCMUS)**	**2016 – 2020**

Department of Mathematics and Computer Science, Honors program

Bachelor degree – GPA: **9.55/10** (**top 3/3200** in HCMUS Class of 2020, **top 1** in Batch 2016)

Supervisor: Prof. Dang Duc Trong

Society of Actuaries   **2018 – 2022**

Professional organization provides training and education on Actuarial Science

Qualification - Passed five SOA Exams with four maximum scores

Work Experience	**FPT Software AI Center, HCMC**	**Feb 2022 - Present**

AI Research Resident

Research topics: Theoretical phenomena in Deep Learning (e.g., Neural Collapse, Posterior Collapse), Variational Autoencoders, Bayesian Optimization.

Sun Life Financial, HCMC   **Jun 2019 – Jan 2022**

Actuarial Analyst

Perform actuarial modeling, reporting and business planning for life insurance company

Publications

- **Hien Dang**, Tho Tran, Stanley Osher, Hung Tran-The, Nhat Ho, Tan Nguyen. Neural Collapse in Deep Linear Networks: From Balanced to Imbalanced Data
  - 40th International Conference on Machine Learning (ICML 2023)

- **Hien Dang**, Tho Tran, Tan Nguyen, Nhat Ho. Posterior Collapse in Linear Conditional and Hierarchical Variational Autoencoders. *Under review, arXiv: 2306.05023*

Honors & Awards

- Two **Silver** and two **Bronze** medals in Algebra and Analysis at Vietnam Mathematics Olympiad for undergraduate students in 2017 and 2018

- Ranked 1st in Mathematics at Soc Trang Municipal Academic Competition for high schools

- Ranked 1st in university entrance score of HCMUS Department of Mathematics and Computer Science in 2016

- Ranked 1st in university entrance examination in my home province Soc Trang in 2016

- Merit scholarships from Vietnam Insitute for Advanced Study in Mathematics - VIASM from 2018-2020

Research Interests

- Deep Learning: deep neural network, neural collapse
- Generative AI: variational autoencoder, diffusion model
- Optimization in Machine Learning: Bayesian optimization, gradient flow