Quan Hoang | Curriculum Vitae

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 quanhoang-pm

Employment

10/2021–present	**Instructor**, *Faculty of Mathematics, Mechanics and Informatics, VNU University of Science*, Hanoi, Vietnam

Education

2017–2021	**Bachelor**, *VNU University of Science*, Hanoi, Vietnam Talented Program in Mathematics GPA: 3.72/4 Grade: High Distinction Thesis title: Starter balanced tournament designs: construction and applications Supervisors: Dr. Nam-Dũng Hoang, Prof. Moshe Rosenfeld

Area of Interest

- Operations research
- Integer programming
- Applied mathematics
- Recreational mathematics

Teaching experience

2022	**Python programming**, *VNU University of Science* Designed course to introduce basic concepts of Python programming language with a final session in which students presented usage and applications of some popular third party libraries.
2022	**Optimization**, *VNU University of Science* Introduced Gurobi Optimizer to students to let them familiarize with the process of mathematical modeling. Also led practice sessions and graded students' assignments.
2021–2022	**Analysis 1**, *VNU University of Science* Prepared lectures, homework, and exams for attended students.

Academic research

10/2020– **Researcher**, *Starter Balanced Tournament Designs*
08/2021 Supervisors: Dr. Nam-Dũng Hoang and Prof. Moshe Rosenfeld
Proposed and implemented integer programming models to solve open related problems.

10/2018– **Researcher**, *Bacterial Motility Near a Smooth Surface*
09/2019 Supervisors: Dr. Nam-Dũng Hoang, Assoc. Prof. Hoa Nguyen, Asst. Prof. Orrin Shindell
Directly conducted research at Trinity University, Texas, USA from 06/2019 to 08/2019.

Industrial projects

10/2021– **Member**, *Queue optimization in healthcare systems*
present Implemented code to simulate actions of doctors and patients inside a hospital, which includes the action choosing the next queue/doctor for each patient. Developed algorithms to minimize the total amount of patients' waiting time to increase their satisfaction of hospitals' services.

01/2021– **Member**, *Inventory optimization*
06/2022 Developed algorithms producing inventory plans for a retailer in Vietnam. The plans were to avoid shortage while minimizing the inventory cost. They made the overall inventory cost decreased by 17%.

Presentations and Talks

08/2022 Recreational chess puzzles and integer programming, *HUS-VAST-HPU joint mathematical meeting for young researchers 2022*

07/2022 Analog clocks and mathematical inspirations, *VIASM Summer School for high school students*

06/2021 Starters Balanced Tournament Designs, the 34th Conference of the European Chapter on Combinatorial Optimization 2021

08/2020 Bacterial Motility Near a Smooth Surface: Experiments and Analysis, *Society of Mathematical Biology Annual Meeting 2020*

Activities

07/2022– **Instructor**, *MIMPython summer class*
09/2022 Instructed undergraduate students to proactively learn Python programming language.
🌐 https://mimpython.github.io/

12/2020 **Instructor**, International Math and Science Olympiad (IMSO)
Taught exploration sessions for Vietnamese IMSO Mathematics Team consisting of 12 selected pupils from secondary schools.

11/2020 **Mentor**, Math Open Day 2020
Helped attendants to explore various mathematical concepts.
The event was organized by Vietnam Institute for Advanced Study in Mathematics.

2017–2018 **Organizer**, *content team*, Math Modeling Contest
Composed problems for the contest.
🌐 https://www.toanmohinhvn.com/

Publications

- (submitted) Nam-Dũng Hoang, **Quan Hoang**, Moshe Rosenfeld.
  Starter Factorization of K_{2n}.

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Academic Honors, Awards, and Grants

07/2019   Trinity University Undergraduate Fellowship
Covered travel expenses, meal per diem, guest house cost during my research duration at Trinity University, Texas, USA.
Award amount: $5,715

05/2019   First Prize at Student Scientific Research Conference, VNU University of Science, Hanoi

04/2019   First Prize in Analysis, National Mathematical Olympiad for University Students

04/2018   First Prize in Algebra, National Mathematical Olympiad for University Students

04/2018   Second Prize in Analysis, National Mathematical Olympiad for University Students

01/2017   Third prize (Bronze Medal), *Vietnam Mathematics Olympiad*

01/2016   Third prize (Bronze Medal), *Vietnam Mathematics Olympiad*

Languages

Vietnamese   Mother-tongue

English   Intermediate, TOEFL iBT 96/120

Miscellaneous

- Writing: LaTeX
- Programming: Python
- Version control: git, Github
- Operating systems: Ubuntu, Windows

References

- Dr. Nam-Dũng Hoang, VNU University of Science, Hanoi, Vietnam
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