TRUNG NGHIA NGUYEN

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(Updated on January 3, 2024)

EDUCATION

The University of North Carolina at Chapel Hill *Aug 2022 – present*
Doctor of Philosophy (PhD), Major: Statistics and Operations Research
PhD Advisor: Prof. Quoc Tran-Dinh

Hanoi University of Science and Technology (HUST) *Aug 2017 – March 2022*
Degree of Engineer, Major: Applied Mathematics and Informatics
Cumulative GPA: 3.70/4.00 *(Valedictorian of Class of 2022)*
Thesis Advisor: Prof. Nguyen Thi Thu Thuy
Degree Classification: Excellent

RESEARCH INTERESTS

Numerical Optimization, Variational Inequalities, Split Feasibility Problems

PUBLICATIONS

1. Nguyen Thi Thu Thuy, **Nguyen Trung Nghia**, *Some novel inertial ball-relaxed CQ algorithms for solving the split feasibility problem with multiple output sets*, Journal of Applied Analysis and Computation, Accepted: 18 December 2023

2. Nguyen Thi Thu Thuy, **Nguyen Trung Nghia**, *An inertial-type algorithm for a class of bilevel variational inequalities with the split variational inequality problem constraints*, Optimization, 2023. https://doi.org/10.1080/02331934.2023.2262493

3. Nguyen Thi Thu Thuy, **Nguyen Trung Nghia**, *A hybrid projection method for solving the multiple-sets split feasibility problem*, Comp. Appl. Math., **42**, Article number 292, 2023. https://doi.org/10.1007/s40314-023-02416-5

4. Nguyen Thi Thu Thuy, **Nguyen Trung Nghia**, *A new iterative method for solving the multiple-set split variational inequality problem in Hilbert spaces*, Optimization, **72**(6), 1549-1575, 2023. https://doi.org/10.1080/02331934.2022.2031193

5. Nguyen Thi Thu Thuy, **Nguyen Trung Nghia**, *A parallel algorithm for generalized multiple-set split feasibility with application to optimal control problems*, Taiwanese J. Math. **26**(5), 1069 - 1092, 2022. https://doi.org/10.11650/tjm/220502

CONFERENCE TALKS

1. **Trung Nghia Nguyen**, Thi Thu Thuy Nguyen, *New hybrid projection method and shrinking projection method for solving the multiple-set split variational inequality problem in Hilbert spaces*, The 20$^{\text{th}}$ Workshop on Optimization and Scientific Computing, April 21–23, 2022 – Ba Vi, Vietnam.

2. **Trung Nghia Nguyen**, Thi Thu Thuy Nguyen, *A new hybrid projection - proximal point algorithm for solving the multiple-set split variational inequality problem in Hilbert spaces*, New Trends in Numerical Optimization and Applications, December 26–27, 2021 – Hanoi, Vietnam.

3. **Trung Nghia Nguyen**, Thi Thu Thuy Nguyen, *A new self-adaptive algorithm for solving the multiple-set split variational inequality problem in Hilbert spaces*, Conference on Contemporary Issues in Mathematics and Applications, October 30–31, 2021 – Hanoi, Vietnam.

4. **Trung Nghia Nguyen**, Xuan Thanh Le, *Semidefinite programming and an application in combinatorics*, The Student Scientific Research Conference of Institute of Mathematics 2021, Vietnam Academy of Science and Technology (VAST), July 01–02, 2021 – Hanoi, Vietnam.

5. **Trung Nghia Nguyen**, Thi Thu Thuy Nguyen, *A strong convergence theorem for an iterative method for solving the multiple-sets split feasibility problem in Hilbert spaces*, The 19$^{\text{th}}$ Workshop on Optimization and Scientific Computing, April 22–24, 2021 – Ba Vi, Vietnam.

RESEARCH EXPERIENCE

University of North Carolina at Chapel Hill *Aug 2023 – present*
Department of Statistics and Operation Research, Research Assistant
Principal Investigator: Prof. Quoc Tran-Dinh
Conducted research on [generalized] self-concordant functions and operators and applications to solve composite optimization and inclusion problems.

Institute of Mathematics, VAST *Feb 2022 – Jul 2022*
Department of Numerical Analysis and Scientific Computing, Visiting Researcher
Conducted several research on numerical methods for solving the multiple-set split variational inequality and relating problems.

Institute of Mathematics, VAST *Apr 2021 – Jul 2021*
Department of Numerical Analysis and Scientific Computing, Student Researcher
Conducted a research on semidefinite programming and its applications in combinatorics and graph theory.

TEACHING EXPERIENCE

Graduate Teaching Assistant *Aug 2022 – present*
Department of Statistics and Operations Research, UNC–Chapel Hill
STOR 320: Introduction to Data Science (Spring 2024, class size: TBD).
STOR 155: Introduction to Data Models and Inference (Summer 2023 - Session 2, class size: 26).
STOR 155: Introduction to Data Models and Inference (Summer 2023 - Session 1, class size: 15).
STOR 113: Decision Models for Business and Economics (Spring 2023, class size: 101).
STOR 215: Foundation of Decision Science (Fall 2022, class size: 70).

Private Tutor *Jul 2014 – Jul 2022*
Give lectures in Mathematics, Physics and Chemistry for high school students.

VOLUNTEER EXPERIENCE

Technical Assistant *Sep 2023*
Department of Statistics and Operations Research, UNC–Chapel Hill
Served as a technical assistant in STORFest celebrating 75 years of STOR Department.

Volunteer Tutor *Oct 2018 – Nov 2020*
Gave supplementary lectures in Calculus, Optimization, and LaTeX Basics Course for many HUST students.

HONORS AND AWARDS

Principal of HUST's **Certificate for the Excellent Graduation** in the year 2022.

Second prize in HUST's Scientific Research Contest for Students, Applied Mathematics and Informatics Division, 2021.

Scholarship of the National Mathematics Development Program academic year 2020 - 2021, awarded by Vietnam Institute for Advanced Study in Mathematics (VIASM) for excellent students in recognized universities' Mathematics Program nationwide.

HUST Scholarship Award type A, 150% tuition fee, selection rate: 1%, academic year 2018 – 2019, 2020 – 2021 (semester 1), 2021–2022 (semester 1).

Acecook Happy Scholarship 2020 for excellent academic performance, awarded by Acecook Vietnam.

SAMI Scholarship academic year 2018–2019, 2019–2020, awarded by Alumni Association of School of Applied Mathematics and Informatics (SAMI).

Bronze Level in the 2019 WorldQuant Challenge, awarded by WorldQuant Virtual Research Center.

Sumitomo Scholarship academic year 2017–2018, awarded by Sumitomo Electric Industries Group.

LANGUAGES

English: Fluent (IELTS: 7.0)
Vietnamese: Native

TECHNICAL SKILLS

Programming Languages Python, R, MATLAB, C#, C

REFERENCES

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