

# TRUNG NGHIA NGUYEN

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(Updated on January 2, 2024)

## EDUCATION

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### 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

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Numerical Optimization, Variational Inequalities, Split Feasibility Problems

## PUBLICATIONS

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1. 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>
2. 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>
3. 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>
4. 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

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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<sup>th</sup> 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<sup>th</sup> Workshop on Optimization and Scientific Computing, April 22–24, 2021 – Ba Vi, Vietnam.

## RESEARCH EXPERIENCE

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**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

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**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

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### 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 L<sup>A</sup>T<sub>E</sub>X Basics Course for many HUST students.*

## HONORS AND AWARDS

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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

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**English:** Fluent (IELTS: 7.0)

**Vietnamese:** Native

## TECHNICAL SKILLS

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

## REFERENCES

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### **Quoc Tran-Dinh, PhD**

Associate Professor, PhD Advisor

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### **Nguyen Thi Thu Thuy, PhD**

Associate Professor, Undergraduate Thesis Advisor

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201-BIS D3-5 Building, 01 Dai Co Viet Street, Hanoi, Vietnam

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