# Hoai Nam Le

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### Research Interests

Algebraic Number Theory, Lattices, and Cryptography

### Education

Florida Atlantic University

PhD in mathematics

Ho Chi Minh City University of Science

M.S in Algebra and Number Theory, GPA: 8.51/10.0

Thesis mark: 10/10

Supervisor: Assoc. Prof. Ha Tran, Dr. Le Van Luyen.

Ho Chi Minh University of Education

B.S. in Mathematics, GPA: 3.45/4.0

Thesis title: Spectrum of a ring.

Thesis mark: 10/10

Supervisor: Assoc. Prof. My Vinh Quang.

Luong The Vinh Highschool for the Gifted

High School

Class specialized in Mathematics.

Florida, United States

Aug 2024 - At present

Ho Chi Minh City, Vietnam

Dec 2022

Thesis title: Well-rounded twists of ideal lattices from imaginary quadratic fields.

Ho Chi Minh City, Vietnam

June 2019

Dong Nai, Vietnam

2012-2015

# **Employment**

Florida Atlantic University

Graduate Teaching Assistant

Ho Chi Minh City University of Science

Adjunct Lecturer

Vietquant Quantitative Researcher Florida, United States

Aug 2024 - At present

Ho Chi Minh City, Vietnam

Feb 2024 - June 2024

Ho Chi Minh City, Vietnam

Apr 2020 - Oct 2023

## **Publications**

Well-rounded twists of the ring of integrers of cyclic cubic fields: with Dat T. Tran, Ha T. N. Tran and David Karpuk, in preparation.

Well-Rounded ideal lattices of cyclic cubic and quartic fields: Communications in Mathematics, October 18, 2023, Volume 31 (2023), Issue 2 (Special issue: Euclidean lattices: theory and applications), with Dat T. Tran and Ha T. N. Tran - https://cm.episciences.org/12425.

Well-rounded twists of ideal lattices from imaginary quadratic fields: Journal of Algebra and Its Applications, with Dat T. Tran and Ha T. N. Tran - https://arxiv.org/abs/2210.15049

## **Seminars and Workshops**

**Graduate Workshop on Linear Algebra over Finite Fields & Applications**: ICERM, Brown University, USA, August 18–29, 2025 (upcoming)

Rethinking Number Theory 6 (RNT 6) Workshop: Online, June 16-27, 2025

**CIMPA School on Applied Number Theory**: Ho Chi Minh City University of Education, June 3–14, 2024

**SEAMS School on Number Theory and Applications**: The Industrial University of Ho Chi Minh City, Vietnam, June 12–22, 2023

CIMPA Research School on Group Actions in Arithmetic and Geometry: Gadjah Mada University, Indonesia, February 17–28, 2020

Workshop on Commutative Algebra: Ton Duc Thang University, Ho Chi Minh City, Vietnam, September 5–8, 2017

# **Projects/Research Experiments**

**Well-Rounded ideal lattices of biquadratic and pure cubic fields**: Jul 2025 - at present, with Dat T. Tran, Morgan Smith, and Ha T. N. Tran.

The exceptional set in Cassels's theorem on smallcyclotomic integers: Jun 2025 - at present, with Kiran Kedlaya and others.

**Well-rounded Twists of Lattices in**  $\mathbb{R}^3$ : Jul 2023 - June 2025, with Dave Karpuk, Dat T. Tran and Ha T. N. Tran.

**Well-rounded ideals of cubic and quartic fields**: June 2021 - Apr 2023, with Dat T. Tran and Ha T. N. Tran.

**On norm Euclidean tri-quadratic fields**: May 2020 - Feb 2021, with Amy Feaver, Dat T. Tran, and Ha T. N. Tran.

**Well-rounded twists of quadratic fields**: Jan 2020 - June 2020, with Dat T. Tran and Ha T. N. Tran.

# **Programming Skills**

Python:	
Sagemath:	

### **Awards and Honors**

2024: Fully Funded Doctoral Fellowship, Florida Atlantic University

**2019**: Recognized for academic excellence as one of the top-performing students in the Mathematics Department, Spring Semester, 4th Year, Ho Chi Minh University of Education.

**2018**: Certificate in Scientific Research, Mathematics Department, Ho Chi Minh University of Education.

**2015**: Consolation Prize in the High School Mathematics Contest, Dong Nai Province.

2014: 3rd Prize in the Dong Nai High School Mathematical Contest.

2013: 1st Prize in the Dong Nai High School Mathematical Contest.

2011: Xuan Loc District Award for Excellence in Secondary School Mathematics.

### Other Activities

**2016,2017,2018**: 1st Prize in Department's Soccer Contest, Ho Chi Minh University of Education.

2018: Participation in "Run For The Heart" Event, Celadon City, Ho Chi Minh City.

2015: Voluntary Spring Campaign, Ho Chi Minh University of Education.

### References

#### 1. Assoc. Prof. Ha Tran

Position: Assistant Professor

Affiliation: Mathematics & Physical Sciences, Concordia University of Edmonton

Email: ha.tran@concordia.ab.ca Telephone: +15879688880

Website: https://sites.google.com/site/hatrannguyenthanh/home

#### 2. Dr. Dung H. Duong

Position: Senior Lecturer

Affiliation: School of Computing and Information Technology, University of Wollongong

Email: hduong@uow.edu.au Telephone: +61 242 214 874

Website: https://sites.google.com/view/dung-duong/home