BACH L. TRAN

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EXPERIENCES

- Data Scientist - TIKI Corporation, October 2018 - October 2019
  - Building predictive models to forecast the demand of the e-commerce market.
  - Solving traveling salesman, vehicle routing, and bin packing problems.
- Principal Data Scientist - be Group JSC, since October 2019
  - Optimizing the order dispatching process.
  - Building predictive models to forecast the demand of users and supply of drivers for the dynamic pricing model.
  - Solving the open traveling salesman, open vehicle routing problems.
  - Building Face Verification API to get vector embedding from faces.

EDUCATION

- **University of Edinburgh**
  Ph.D in Mathematics, September 2014 - July 2018.
  Thesis: *On k-normality and Regularity of Normal Projective Toric Varieties*
  Advisor: Milena Hering
- **University of Cambridge**
  Master of Advanced Studies in Pure Mathematics, October 2013 - June 2014.
- **University of Missouri, Columbia, MO**
  Bachelor of Science in Mathematics with Honor, January 2010 - December 2012, Summa Cum Laude.

SKILLS

Professional Skills

- Time Series Analysis
- Machine Learning
- Deep Learning
- Mathematical Modeling
- Combinatorial Optimization

Tools

- Git
- LaTeX
- C/C++
- OpenMP
- Python

PUBLICATIONS

Proceedings

- A Reider-type Theorem for Smooth Projective Toric Surfaces (2016)
  Algebraic and Geometric Combinatorics on Lattice Polytopes - Proceedings of the Summer Workshop on Lattice Polytopes, 2018.
  `https://arxiv.org/abs/1901.07685`

To appear

- The Eisenbud-Goto Conjecture for Weighted Projective Toric Fano Varieties (2018).
  `http://arxiv.org/abs/1902.03730`

Preprints

- On k-normality and Regularity of Normal Toric Varieties. (2017, submitted)
  `https://arxiv.org/abs/1708.04340`

HONORS

Scholarships

- Edinburgh Global Research Scholarship, Univeristy of Edinburgh, 2015.
- The Dr. Laura Wisewell Travel Scholarships, Univeristy of Edinburgh, 2015.
- School of Mathematics Studentship, University of Edinburgh, 2014-2018.
- Hazel Shelton Grabosch Scholarship in Mathematics, University of Missouri, 2012.
- Ruth Earline Taylor Allen Scholarship, University of Missouri, 2011 and 2012.
- Curator Grant-in-Aid, University of Missouri, Fall 2011 and Spring 2012.
- Phyllis Ann Heyssel Scholarship, University of Missouri, 2011.

Awards

- Postgraduate Student Essay Prize, School of Mathematics, University of Edinburgh, 2016.
- Second Prize, Vietnam National Mathematical Olympiad, 2009.

ACTIVITIES

- William Lowell Putnam competition 2010, 2011, and 2012 participant (top 100 in 2012, top 500 in 2010 and 2011).
- Missouri Collegiate Mathematics Competition 2011 and 2012.
- The Mathematical Contest in Modeling 2011.

TALKS AND PRESENTATIONS

- Summer Workshop on Lattice Polytopes, Osaka, 2018.
- Interactions with Lattice Polytopes, Magdeburgh, September 2017.
- Toric Varieties Seminar, Loughborough, November 2017.
- EDGE Seminar, Edinburgh, December 2017.

CONFERENCES ATTENDED

- Summer Workshop on Lattice Polytopes, Osaka, 2018.
- Tropical Geometry, Amoebas and Polytopes, Stockholm, 2018.
- Interactions with Lattice Polytopes, Magdeburgh, 2017.
- GLEN Algebraic Geometry Seminar, Manchester, 2017.
- Positivity in algebraic and complex geometry, Edinburgh, 2017.
- Combinatorial Algebraic Geometry, Major Thematic Program at the Fields Institute, Toronto, 2016.
- Macaulay2 Workshop, Warwick, 2016.
- Minimal free resolutions, Betti numbers, and combinatorics, Edinburgh, 2015
- British Algebraic Geometry Meeting, 2015-2017.
- Summer school: Cones and positivity, Loughborough, 2015.

TEACHING EXPERIENCE

- Led small-group tutorials in the following courses at the University of Edinburgh:
    1. General Topology
    2. Honours Algebra Skills
    3. Proofs and Problem Solving
    4. Introduction to Number Theory
    5. Calculus and its Applications
    6. Introduction to Linear Algebra
- Provided individual help in the drop-in MathsBase facility.

REFEREES Available upon request