

LAM PHAM

YALE UNIVERSITY
Department of Mathematics
lam.pham@yale.edu
www.lamlaurentpham.com

Citizenship: French, U.S. Permanent Resident.

Academic Positions

Brandeis University 2019-current
Instructor of Mathematics

Education

Yale University 2019
Ph.D., *Mathematics*, advisors:
Gregory Margulis (Yale University)
Emmanuel Breuillard (University of Cambridge)

Stanford University 2013
M.S., *Computational and Mathematical Engineering (iCME)*

École Centrale Paris 2011
Diplôme d'Ingénieur des Arts et Manufactures
M.S., *Energy and Aerospace Engineering*, Honors
Supervisor: Prof. Christophe Laux (EM2C), Thesis: "*Plasma Assisted Combustion*"

Research Interests

I am broadly interested in Lie groups and their discrete subgroups, including arithmetic groups and thin groups. More specifically, I am interested in interactions among the following aspects:

- (i) Harmonic Analysis and Representation Theory, Dynamics;
- (ii) Geometric Group Theory, Asymptotic Group Theory;
- (iii) Diophantine Analysis and Geometry; Arithmetic Combinatorics; Spectral Theory.

Awards and Honors

Berthe Corr and James Corr Memorial Fellowship (Yale University) 2014-2015
Yale University Graduate Fellowship 2013-2018

Preprints & Publications

1. Uniform Kazhdan constants and paradoxes of the affine plane, *preprint* arXiv:1904.02604

Invited Talks

* =*upcoming / tentative*

2019

Yale University, Group Actions and Dynamics Seminar Apr 8
Wesleyan University, Topology et al. seminar Apr 3

2018

Cambridge University, Discrete Analysis Seminar	Nov 21
Rutgers University Number Theory Seminar	Oct 30
New York Group Theory Seminar (CUNY Magnus Seminar)	Oct 26

2016

Yale University Junior Colloquium pre-talk	Apr 22
University of Münster Logic seminar	Jan 21

Visits and Conferences

* = *upcoming / tentative*

2019

* Banff International Research Station <i>Discrete Subgroups of Lie Groups</i>	Dec 8-13
* ICERM, Brown University <i>Illustrating Dynamics and Probability</i>	Nov 11-15
IHES Summer School <i>Aspects of Geometric Group Theory</i>	July 8-19
MSRI Berkeley Summer Graduate School <i>Random and arithmetic structures in topology</i>	June 10-21
Bowdoin College <i>Boundaries of Random Walks and Applications</i>	June 4-6
Cretaro, Italy <i>Dynamique d'actions de groupes, une conférence en l'honneur d'Yves Benoist</i>	May 27-31
University of Cambridge <i>Number Theory and Dynamics Conference 2019</i>	Mar 25-29
The Hebrew University of Jerusalem <i>Super Strong Approximation in Groups workshop</i>	Feb 17-21

2018

Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach <i>Arbeitsgemeinschaft: Rigidity of Stationary Measures</i>	Oct 7 - 12
Stanford University <i>The Mathematical Legacy of Maryam Mirzakhani</i>	May 18 - 20
ICERM, Brown University <i>Computational Challenges in the Theory of Lattices</i>	Apr 23 - 27
Institut Henri Poincaré <i>Workshop Model Theory and Combinatorics</i>	Jan 29 - Feb 2

2017

Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach <i>Arbeitsgemeinschaft: Additive Combinatorics, Entropy, and Fractal Geometry</i>	Oct 8 - 13
Isaac Newton Institute for Mathematical Sciences, Cambridge <i>Approximation, Deformation, Quasification</i>	May 8 - 12

Northwestern University
Spring School on Analysis on Groups and Measured Group Theory Apr 3 - 7

Mathematical Institute, Oxford
Young Geometric Group Theory Meeting VI Mar 20 - 24

2016

Israel Institute for Advanced Studies, Jerusalem
The 20th Midrasha Mathematicae, 60 Faces to Groups, a conference in honor of Alexander Lubotzky's 60th birthday Nov 6 - 11

Institut Henri Poincaré, Paris
Dynamics, Geometry and Number Theory, a conference in honor of Gregory Margulis' 70th birthday Jun 13 - 17

Institute for Advanced Study, Princeton
Analysis and Beyond: Celebrating Jean Bourgain's Work and Impact May 21 - 24

Institute for Advanced Study, Princeton
Thin Groups and Superapproximation in Geometry and Arithmetic Mar 28 - Apr 1

The Southwest Center for Arithmetic Geometry, University of Arizona
Arizona Winter School: Analytic Methods in Arithmetic Geometry Mar 12-17, 2016

ICERM, Brown University
Ergodic, Algebraic and Combinatorial Methods in Dimension Theory Feb 15 - 19

ICERM, Brown University, Mini-Course
Equidistribution and Dimension via Additive Combinatorics (Elon Lindenstrauss) Feb 11 - 12

2015

Texas A&M University
Geometric and Probabilistic Methods in Group Theory and Dynamical Systems Nov 9 - 12

École Normale Supérieure, Paris
Growth, Symbolic Dynamics and Combinatorics of Words in Groups Jun 1 - 5

University of Notre Dame, Mini-Courses
Thematic Program on Boundaries and Dynamics (Part of the International Conference on Boundaries and Ergodic Geometry) May 26 - 29

CUNY Graduate Center
Combinatorial and Additive Number Theory May 19 - 22

IMA Annual Program Year Workshop, University of Minnesota
Analytic Tools in Probability, and Applications Apr 27 - May 1, 2015

ICERM, Brown University
Mathematics of Lattices and Cryptography Apr 21-24

2014

IMA Annual Program Year Workshop, University of Minnesota
Additive and Analytic Combinatorics Sep 29 - Oct 3

Cornell University
10th Cornell University Probability Summer School Jul 14-25

ICERM, Brown University
Electrical Flows, Graph Laplacians, and Algorithms: Spectral Graph Theory and Beyond Apr 7-11

Service

Yale University

Directed Reading Program (co-organizer, with Thomas Hille) Spring 2016
 Graduate Student Seminar (organizer) Spring 2015

Teaching

Brandeis University

Introduction to Combinatorics (MATH 39a) Fall 2019
 Introduction to Real Analysis, Part II (MATH 110b) Spring 2020
 Lie Groups (MATH 224b) Spring 2020

Yale University

Section Instructor

Calculus of Functions of Several Variables (MATH 120) Fall 2018
 Calculus of Functions of One Variable II (MATH 115) Fall 2016 & 2017

Lead Instructor

Calculus of Functions of One Variable II (MATH S115) Summer 2016 & 2018

Graduate Mentor, Directed Reading Program

Lie groups and Lie algebras (with Thomas Hille) Spring 2016
 Undergraduate student mentored: Max Weinreich
 Expansion in finite simple groups of Lie type Spring 2016
 Undergraduate student mentored: Alex Atanasov

Coach

Calculus of Functions of One Variable II (MATH 115) Fall 2015

Teaching Fellow

Vector Calculus and Linear Algebra (MATH 231), Giulio Tiozzi Spring 2015
 Calculus of Functions of One Variable II (MATH 115), Asher Auel Fall 2013

Stanford University

Teaching Assistant (G/U, Graduate, Undergraduate).

Numerical Methods (CME 206, G), Gianluca Iaccarino Spring 2012
 ODEs for Engineers (CME 102, U), Eric Darve Winter 2012
 Vector Calculus for Engineers (CME 100, U), Eric Darve Fall 2011

Languages

Native: French, Vietnamese

Fluent: English (Cambridge CPE, TOEFL IBT 115/120).

Computer Skills

Python, Matlab, Mathematica.