NAM TRANG
CURRICULUM VITAE

CURRENT POSITION	Visiting Assistant Professor

CONTACT INFORMATION

Department of Mathematics
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UNDERGRADUATE INSTITUTIONS

- September 2004 – June 2007: University of California, Irvine; Irvine, CA, USA
- August 2002 – June 2004: Saddleback College; Mission Viejo, CA, USA

GRADUATE INSTITUTIONS

- August 2007 – June 2013: University of California, Berkeley; Berkeley, CA, USA

DEGREES

- MS in Information and Computer Science, UC Irvine, 2007.
- MA in Mathematics, UC Irvine, 2007.
- PhD in Mathematics, UC Berkeley, 2013.

SKILLS AND INTERESTS

- Problem solving, research in mathematics, teaching/advising/mentoring, computer science.
- Mathematics: logic, set theory, computability theory, model theory, probability/statistics and math finance.
- Computer science: data structures/algorithm design and analysis, coding, machine learning and data science.
- Proficient in: Latex, Mathlab, C++, Java (sample codes: see the Virtual Math Museum http://3d-xplormath.org), Python (including matplotlib, numpy, sklearn, theano), and TensorFlow.

POSTDOCTORAL INSTITUTIONS

- July 2015 – present: University of California, Irvine; Irvine, CA, USA
- August 2013 – June 2015: Carnegie Mellon University; Pittsburgh, PA, USA

AWARDS AND GRANTS

- The Howard Tucker Award, Outstanding Senior in Mathematics, UC Irvine, 2007.
- NSF Grant DMS-1565808, 2016–2019 (PI on the NSF research award for project titled: "Descriptive Inner Model Theory, Large Cardinals, and Combinatorics").

SYNERGETIC AND EDUCATIONAL ACTIVITIES

- Contributor to the Virtual Math Museum (http://3d-xplormath.org/) by writing Java code for 3D-XplorMath-J, which is a cross-platform museum that exhibits a host of interesting mathematical objects and helps learning geometry via visualization.
- 2014: Served on Chris Lambie-Hanson's PhD thesis committee at CMU.
- 2016: Co-advised and served on Daniel Rodriguez's PhD thesis committee at CMU.
- Co-organizer of the 2016 Conference on Descriptive Inner Model Theory and Hod Mice, UC Irvine, 18–29 July, 2016.
- 2016: Participate (as both Assistant and Leader) to the UCI Math Circle. The

goal of the program is to bring together faculty, graduate students from UCI and high school/middle school students in Orange County with the goal of helping the students explore advanced mathematics and promote mathematical creativity.

- Participating in the UCI Center for Engaged Instruction's pedagogical programs with the goal of earning a Certificate in Teaching Excellence in Spring 2017.
- NSF Panelist.
- Reviewer for the AMS Mathematical Reviews.
- 2016: Supervising an independent reading course for Paul Smith, an undergraduate student at UCI, on topology and set theory.

PUBLICATIONS

1) Trang, N., HOD in natural models of AD^+, Annals of Pure and Applied Logic, 165(10), 2014, 1533-1556

2) Trang, N., Determinacy in $L(\mathbb{R}, \mu)$, Journal of Mathematical Logic, 14(01), 2014, 23 pages

3) Sargsyan, G. and Trang, N., Non-tame mice from tame failures of the unique branch hypothesis, Canadian Journal of Mathematics, 66(4), 2014, 903-923

4) Trang, N., PFA and guessing models, Israel Journal of Mathematics, 215 (2016), 607–667, http://dx.doi.org/10.1007/s11856-016-1390-x.

5) Trang, N., Structure theory of $L(\mathbb{R}, \mu)$ and its applications, Journal of Symbolic Logic, 80(01), 2015, 29-55.

6) Trang, N., Derived models and supercompact measures on $\wp_{\omega_1}(\wp(\mathbb{R}))$, Mathematical Logic Quarterly, 61(1-2), 2015, 56-65.

7) Sargsyan, G. and Trang, N., Tame failures of the unique branch hypothesis and models of $\mathsf{AD}_{\mathbb{R}} + \Theta$ is regular, Journal of Mathematical Logic, 16(02), 2016, 31 pages, 10.1142/S0219061316500070, .

8) Shi, X. and Trang, N., I_0 and combinatorics at λ^+, Archive of Mathematical Logic, 2016, 24 pages, DOI 10.1007/s00153-016-0518-3.

PREPRINTS

9) Steel, J.R. and Trang, N., AD^+, derived models, and Σ_1-reflection, 1st Conference on the Core Model Induction and Hod Mice, Institut f*ü*r Mathematische Logik, WWU M*ü*nster, Aug 08–Aug 19, 2011

10) Rodríguez, D. and Trang, N., $L(\mathbb{R}, \mu)$ is unique, submitted to Advances in Mathematics, 2015.

11) Schlutzenberg, F. and Trang, N., Scales in hybrid mice over $\mathbb{R}$, submitted to the Annals of Pure and Applied Logic, 2016.

12) Schlutzenberg, F. and Trang, N., The fine structure of operator mice, submitted to the Archive of Mathematical Logic, 2016.

13) Wilson, T. and Trang, N., Determinacy from strong compactness of ω_1, submitted to the Annals of Pure and Applied Logic, 2016.

14) Ikegami, D., and Trang, N., On a class of maximality principles, submitted to the Archive of Mathematical Logic, 2016.

Books

1) Sargsyan, G., and Trang, N., *The largest Suslin axiom*, book, submitted to the Springer's Lecture Notes in Logic series, 2016.

Reviewed
articles

1. Wilson, Trevor, The Envelope of a Pointclass under a Local Determinacy Hypothesis, *Annals of Pure and Applied Logic*.

2. Schimmerling, Ernest, A Core Model Toolbox and Guide, a book chapter in *The Handbook of Set Theory*.

3. Mitchell, William, Inner Models for Large Cardinals, a book chapter in *Sets and extensions in the twentieth century*.

4. Fuchs, Gunter and Schindler, Ralf, Inner Model Theoretic Geology, *The Journal of Symbolic Logic*.

Collaborators

- Matt Foreman, University of California, Irvine; Irvine, CA, USA
- Daisuke Ikegami, Tokyo Denki University; Tokyo, Japan
- Daniel Rodriguez, Carnegie Mellon University, USA; currently at Google, Pittsburgh
- Grigor Sargsyan, Rutgers University; Piscataway, NJ, USA
- Farmer Schlutzenberg, WWU Münster, Münster, Germany, USA
- Xianghui Shi, Beijing Normal University; Beijing, China
- John R. Steel, University of California, Berkeley; Berkeley, CA, USA
- Trevor Wilson, Miami University; Oxford, OH, USA
- Martin Zeman, University of California, Irvine; Irvine, CA, USA

Graduate
Advisors and
Postdoctoral
Sponsors

- John R. Steel, University of California, Berkeley; Berkeley, CA, USA (Thesis advisor)
- Ernest Schimmerling, Carnegie Mellon University; Pittsburgh, PA, USA (Postdoctoral Sponsor)
- Martin Zeman, University of California, Irvine; Irvine, CA, USA (Postdoctoral Sponsor)