

# CURRICULUM VITAE

## OANH NGUYEN

EDUCATION	2012-2017	Ph.D. in Mathematics, Yale University. Advisor: Professor Van Vu
	2011-2012	M.S. in Applied Mathematics, Tours University, France. Advisor: Professor Marc Peigné
	2007-2011	B.S. in Mathematics and Computer Science, University of Science, Vietnam. Advisor: Professor Dương Minh Đức
EMPLOYMENT	2021-	Assistant professor, Division of Applied Mathematics, Brown University
	2020-2021	Assistant professor, Department of Mathematics, University of Illinois at Urbana-Champaign
	2017-2020	Instructor, Princeton University. Mentor: Professor Allan Sly
HONORS AND AWARDS	2021	AIM SQuaRE (co-PI)
	2020-2023	NSF research grant DMS-2125031 (formerly DMS-1954174)
	2019-2020	AMS Simons Travel Grant
SERVICES	2021	Co-organize AAMS special session for JMM 2022 Co-organize <i>Workshop on Random functions</i>
	2017-2020	Co-organize <i>Topics in Probability Seminar</i> (Princeton)
PUBLICATIONS	1.	Random orthonormal polynomials: universality and expected number of real roots (with Yen Do and Van Vu), <i>arXiv preprint arXiv: 2012.10850</i> , 2020.
	2.	Random trigonometric polynomials: universality and non-universality of the variance for the number of real roots (with Yen Do and Hoi Nguyen), to appear in <i>Annales de l'Institut Henri Poincaré - Probabilités et Statistiques</i> .
	3.	On the spectrum of random walks on complete finite d-ary trees ( <i>with Evita Nestoridi</i> ), <i>Electronic Journal of Probability</i> 43, 2021, 1–17.
	4.	Critical value asymptotics for the contact process on random graphs (with Danny Nam and Allan Sly), to appear in <i>the Transactions of the American Mathematical Society</i> .
	5.	Random polynomials: central limit theorems for the real roots (with Van Vu), to appear in <i>Duke Mathematical Journal</i> .

6. Survival and extinction of epidemics on random graphs with general degrees (with Shankar Bhamidi, Danny Nam and Allan Sly), *The Annals of Probability* 49(1), 2021, 244–286.
7. On the mixing time of the Diaconis-Gangolli random walk on contingency tables over  $\mathbf{Z}/q\mathbf{Z}$  (with Evita Nestoridi), *Annales de l'Institut Henri Poincaré - Probabilités et Statistiques* 56(2), 2020, 983–1001.
8. Roots of random functions: a framework for local universality (with Van Vu), to appear in *the American Journal of Mathematics*.
9. Random eigenfunctions on flat tori: universality for the number of intersections (with Mei-Chu Chang, Hoi Nguyen, and Van Vu), *International Mathematics Research Notices* 2020(24), 2020, 9933–9973.
10. Roots of random polynomials with coefficients of polynomial growth (with Yen Do and Van Vu), *The Annals of Probability* 46(05), 2018, 2407–2494.
11. Embedding large graphs into a random graph (with Asaf Ferber and Kyle Luh), *Bulletin of the London Mathematical Society* 49(05), 2017, 784–797.
12. Packing loose Hamilton cycles (with Asaf Ferber, Kyle Luh, and Daniel Montealegre), *Combinatorics, Probability and Computing* 26(06), 2017, 839-849.
13. Anti-concentration for polynomials of Rademacher random variables and applications in complexity theory (with Raghu Meka and Van Vu), *Theory of Computing* 12(11), 2016, 1-17.
14. On the number of real roots of random polynomials (with Hoi Nguyen and Van Vu), *Communications in Contemporary Mathematics* 18(04), 2016, 1550052.

INVITED  
TALKS

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| 2021 | <ul style="list-style-type: none"> <li>- <i>Conference on random nodal domains, Rennes (France)</i></li> <li>- Vietnam Summer Meeting (Vietnam)</li> <li>- University of Birmingham (UK), Data Science and Computational Statistics seminar</li> <li>- SAMSI program on Combinatorial Probability</li> </ul>              |
| 2020 | <ul style="list-style-type: none"> <li>- Probability and Analysis Webinar</li> <li>- Brown, Colloquium</li> <li>- <i>AMS Spring Southeastern Sectional Meeting</i></li> <li>- Princeton, Noetherian Ring</li> <li>- Notre Dame, Colloquium</li> <li>- UC Davis, Mathematical Physics &amp; Probability seminar</li> </ul> |
| 2019 | <ul style="list-style-type: none"> <li>- UIUC, Colloquium</li> <li>- Duke, Probability Seminar</li> <li>- Penn State University, Probability Seminar</li> <li>- CUNY, Probability Seminar</li> </ul>  |

- University of Chicago, Probability Seminar
- *Columbia-Princeton Probability day*
- University of Wisconsin-Madison, Probability seminar
- 2018 - *Women and Mathematics program, Princeton Day*
- Ohio State University, Combinatorics seminar
- *Simons Collaboration on Algorithms and Geometry monthly meeting, New York*
- Rutgers University, Discrete Mathematics Seminar
- 2017 - Princeton, Probability seminar
- Harvard University, Random Matrix Theory and Probability Seminar
- Rutgers University, Discrete Mathematics Seminar
- 2016 - University of California, Los Angeles, Analysis and PDE seminar
- University of Washington, Probability seminar
- Ohio State University, Combinatorics seminar
- *Simons conference on random graph, University of Texas at Austin (poster)*
- University of Texas at Austin, Random Structures seminar
- 2015 - University of Virginia, Harmonic Analysis and PDEs seminar
- *Random Structures and Algorithms Conference, Carnegie Mellon University*

MENTORING

- 2018 Advise senior thesis for **Heather Newman** (Princeton class of 2019), Princeton
- 2017 Advise senior thesis for **Soonho Steven Kwon** (Princeton class of 2018), Princeton
- 2016 Mentor **Chi Tong** (Yale class of 2018) in the Directed Reading Program in Mathematics, Yale
- 2015 Mentor **Dylan Greaves** (Yale class of 2015) in the Directed Reading Program, Yale.