# Apurva Nakade

## **EDUCATION**

## Ph.D.

in Mathematics, Johns Hopkins University, (expected) **2019** 

#### M.Sc.

in Mathematics, Chennai Mathematical Institute, India, **2013** 

#### B.Tech.

in Computer Science & Engineering, IIT Kanpur, India, 2010

#### **CONTACT**

5<sup>th</sup> year Grad Student, Mathematics Department, Johns Hopkins University.

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#### **INTERESTS**

Homotopy theory, Algebraic topology, Knot Theory, Mathematical Physics, Symplectic Topology, Math Education, Web design

#### **PAPERS**

- 1. Manifold Calculus and the H-principle, (submitted)
- 2. Effect of increasing the energy gap between the two lowest energy states on the mixing time of the Metropolis algorithm, (with Somenath Biswas) Information Processing Letters, IPL4801

# **CURRENT PROJECTS**

- 1. Knot Theory something something
- 2. Equivariant Manifold Calculus

# **RESEARCH TALKS**

- 1. Manifold Calculus and the H-principle, JHU Topology Seminar, Feb 2018
- 2. Homotopy colimits and limits, European Autumn School in Topology, 2017
- 3. Manifold Calculus and the H-principle, AMS Special Session in Homotopy Theory, 2017

#### **TEACHING**

## MATHCAMP

- 1. Academic Coordinator
- 2. Mentor

# IHU

- 1. H2G2 Algebraic Topology
- 2. IBL Honors Calculus
- 3. IBL Symmetries and Polynomials

#### MISC

- 1. Prof. Joel Dean award, JHU
- 2. Direct Reading Program, JHU
- 3. Algebra Qual Prep, JHU

# SERVICE CLASSES

1. Instructor: Calculus II, Differential Equations, (Online) Linear Algebra

2. TA: Calculus I, II and III, Hon. Linear Algebra, Hon. Multivariable Calculus, Compact Riemann Surfaces, Advanced Algebra

## **CONFERENCES ATTENDED**

- 1. Science of Learning Symposium, JHU 2014, 16, 18
- 2. Graduate Student Conference, Temple University
- 3. AMS Sectional Meeting, UC Riverside
- 4. European Autumn School in Topology, Netherlands
- 5. Topology Festival, Cornell University
- 6. Georgia International Topology Conference, University of Georgia
- 7. Alpine Algebraic & Applied Topology Conference, Switzerland
- 8. WCATSS, University of Oregon, Eugene
- 9. GSTSC, Indiana University, Bloomington
- 10. Mid-Atlantic Topology Conference, Johns Hopkins University
- 11. Midwest Topology Seminar, Northwestern University
- 12. Geometry and Topology Conference, Lehigh University
- 13. Mid-Atlantic Topology Conference, University of Virginia

- 14. Midwest Topology Seminar, University of Illinois Chicago
- 15. Midwest Topology Seminar, Northwestern University
- Modular invariants in Topology and Analysis, Regensburg
- 17. WCATSS on Field theories, UBC
- 18. Introductory Workshop on Algebraic Topology, MSRI
- 19. Joint Mathematical Meetings, Baltimore
- 20. Classification of Manifolds, NEHU
- 21. H-principle, Chennai Mathematical Institute
- 22. Groups and geometries, ISI Bangalore
- 23. String Topology, Vivekananda University
- 24. Kervaire Invariant One, ISI Kolkata
- 25. Number Theory workshop, Tezpur University
- 26. Lie algebras and their representations, CMI
- 27. Nurture camp, Institute of Mathematical Sciences

## PRE COLLEGE

- 1. **IMO bronze medal**, Slovenia, highest scorer from India
- 2. **273 rank** at Indian Institutes of Technology
- 3. Elegant solution award at IMO training camp
- 4. National Talent Search Examination, (NTSE) scholarship
- 5. Kishore Vaigyanik Protsahan Yojana, (KVPY) scholarship

# **OTHER INTERESTS**

# Web Design

I've designed and maintain a blog on Github using Hugo, SASS, JQuery

## Misc

Writing, Dancing, Yoga, Hiking, Backpacking