Apurva Nakade

5th 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.

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**

Preprints & Publications

An Application of h-principle to Manifold Calculus,

(submitted to HHA), arXiv 1711.07670

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

Teaching

PFFF Teaching Academic Program

- Currently enrolled in a certification course

Mathcamp 2018 - Academic Coordinator

- Coplanned the academic schedule,
- Participated in mentor hiring,
- Invited visiting speakers,
- Taught a variety of undergraduate-level courses.

Mathcamp 2017 - Mentor

- Taught a variety of undergraduate-level courses.
- Was an RA and AA at camp.

Directed Reading Program

- Co-organizer for DRP in Fall 2018, Spring 2017.
- Mentor for DRP for 3 semesters.

Intersession Courses Instructor - JHU

- H2G2 Algebraic Topology
- Symmetries & Polynomials (**IBL**)

Instructor - JHU

- Honors Single Variable Calculus (**IBL**), Fall 2018, 2017
- Linear Algebra (Online)
- Differential Equations
- Calculus 2 for Engineers

TA - JHU

- **Head TA** for Calc II
- Calculus I, II, and III, Hon. Linear Algebra, Hon. Multivariable Calculus

TA - CMI

- Compact Riemann Surfaces, Advanced Algebra

Awards

Prof. Joel Dean award, JHU, 2016
Given annually to those graduate students who have shown excellence as a teaching assistant in the undergraduate math program.

IMO bronze medal, Slovenia, 2006
Highest scorer from India.

273 rank, at Indian Institutes of Technology Joint Entrance Exam

Talks

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

Conferences Attended

- **Science of Learning Symposium, JHU 2014, 16, 18**
- Graduate Student Conference, Temple University
- AMS Sectional Meeting, UC Riverside
- European Autumn School in Topology, Netherlands
- Topology Festival, Cornell University
- Georgia International Topology Conference, University of Georgia

- Alpine Algebraic & Applied Topology Conference, Switzerland
- WCATSS, University of Oregon, Eugene
- GSTSC, Indiana University, Bloomington
- Mid-Atlantic Topology Conference, Johns Hopkins University
- Midwest Topology Seminar, Northwestern University
- Geometry and Topology Conference, Lehigh University
- Mid-Atlantic Topology Conference, University of Virginia
- Midwest Topology Seminar, University of Illinois Chicago
- Midwest Topology Seminar, Northwestern University
- Modular invariants in Topology and Analysis, Regensburg
- WCATSS on Field theories, UBC
- Introductory Workshop on Algebraic Topology, MSRI
- Joint Mathematical Meetings, Baltimore
- Classification of Manifolds, NEHU
- H-principle, Chennai Mathematical Institute
- Groups and geometries, ISI Bangalore
- String Topology, Vivekananda University
- Kervaire Invariant One, ISI Kolkata
- Number Theory workshop, Tezpur University
- Lie algebras and their representations, CMI
- Nurture camp, Institute of Mathematical Sciences

Other Interests

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

Other hobbies: Writing, Dancing, Yoga, Hiking, Backpacking, Improv Comedy.