Badri Vishal Pandey

Contact Information	Dept. of Mathematics University of Virginia Charlottesville, VA 22904	(669) 226-7426 badrivishal9451@gmail.com bp3aq@virginia.edu

Research Interests   Analytic and Algebraic Number Theory

Education

University of Virginia, Charlottesville, VA

PhD July, 2019 - December, 2022.

- *Mathematics*
  Thesis title: On Higher Turán Inequalities for the Plane Partitions, Ellipsoidal
  T-Designs, and j-Inversion
  Thesis advisor: **Ono, Ken**
  Marvin Rosenblum Professor of Mathematics, Department of Mathematics,
  University of Virginia.

Indian Statistical Institute, Bangalore, India

M.Math July, 2017-2019.

- *Mathematics*

Indian Statistical Institute, Bangalore, India

B.Math(Hons.) July, 2014-2017.

- Major: *Mathematics*

Papers and publications

- Modular forms and Ellipsoidal T-designs, The Ramanujan Journal

- Inversion Formulas for the j-function Around Elliptic Points (Co-author: De Las Penas Castano A), Archiv der Mathematik

- Higher Order Turán Inequalities for the Plane Partition Function (submitted)

- Congruence relations for Borcherds exponents (Co-authors: Ono K, Mono A) (in preparation)

TALKS

- Inversion of the Modular j-function   Jan, 2023
  KSCSTE, Kerala

- Inversion of the Modular j-function   Jan, 2023
  IMSc, Chennai

- Higher Turán Inequalities for the Plane Partitions   January 19, 2023
  Indian Statistical Institute, Bangalore

- On Higher Turán Inequalities for the Plane Partitions, Ellipsoidal T-Designs, and
  j-Inversion   May, 2022
  Graduate seminar, University of Virginia

- Inversion of the Modular j-function   May, 2022
  NISER, Bhubneswer

- Ellipsoidal T-design   December 17, 2020
  18th Nagoya combinatorial seminar

- Lightning Rounds by graduate students,   March 03, 2020
  UVA Undergraduate Math Club

TEACHING
EXPERIENCE

- *Mentor for Directed Reading Program at University of Virginia,*   Fall 2022

- *Teaching Assistant for Research Experiences for Undergraduates at the University
  of Virginia,*   Summer 2020

- *Teaching Assistant for Research Experiences for Undergraduates at the University
  of Virginia,*   Summer 2021

- *Teaching Assistant for Research Experiences for Undergraduates at the University
  of Virginia,*   Summer 2022

- *Instructor for Math 1220, A survey of calculus 2,*   Fall 2021

- *Instructor for Math 1220, A survey of calculus 2,*   Spring 2021

- *Instructor for Math 1210, A survey of calculus 1,*   Fall 2020

- *Teaching Assistant for Math 3250, Ordinary Differential Equations,* Spring 2020

- *Grader for Math 3310, Basic Real Analysis,*   Spring 2020

- *Teaching Assistant for Math 2310, Calculus III,*   Fall 2019

- *Grader for Math 4651, Advanced Linear Algebra,*   Fall 2019

CONFERENCES
AND WORKSHOPS

- *Virginia Mathematics Lecture: Martin Hairer (Imperial College London)* November 29-December 1, 2022

- *100 Years of Mock Theta Functions (attended virtually),*   May 22-24, 2022

- *Virginia Mathematics Lecture: Mikhail Khovanov (Columbia)*   April 18-20, 2022

- *Virginia Mathematics Lecture: Curtis McMullen (Harvard)* November 8-10, 2021

- *Virginia Mathematics Lecture: Greg Lawler (UChicago)*   February 12-14, 2020

- *Virginia Mathematics Lecture: Peter Sarnak (IAS Princeton)* November 4-9, 2019

- *Advanced Instructional School on Topology,*   May 2018
  National Board of Higher Mathematics

- *Algebraic Geometry,*   Dec 2017
  Indian Statistical Institute

ACHIEVEMENTS
AND
SCHOLARSHIPS

Among top 100   2019
TIFR Graduate School Admissions Written Exam

Rank 46   2018
CSIR UGC National Eligibility Test

Academic fellowship for excellent performance
BMath Third year   2017

Academic fellowship for being second rank holder
BMath First year   2014

	Ranked 21 out of 150,000 candidates	2014
	Uttar Pradesh State Engineering Entrance Exam	

Refereeing

- *Journal of Number Theory*

- *International Journal of Number Theory*

- *Research in Number Theory*

- *The Ramanujan Journal*

- *Transactions of the American Mathematical Society*

Extracurricular
Activities

• *ISI intra-college Cricket tournament winner*, Indian Statistical Institute, Bangalore center	2018
• *ISI intra-college Soccer tournament winner*, Indian Statistical Institute, Bangalore center	2015 & 2017
• *Sports Committee Member*, Indian Statistical Institute, Bangalore center	2015
• *Mentor of first year undergrad*, Indian Statistical Institute, Bangalore center	2015

Technical
Skills

Sage(elementary), Python(elementary), Mathematica, Octave, LateX, C, C++, html