Badri Vishal Pandey

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Research Interests	Analytic and Algebraic Number Theory (Elliptic c Hypergeometric series)	urves, Modular forms, Partitions,				
Education	Universität zu Köln , Köln, Germany					
	Post-doc March, 2023 - February, 2026					
	Mathematics Supervisor: Prof. Dr. Kathrin Bringman W3 Professor (full professor), Mathematical I University of Köln	n nstitute,				
	University of Virginia, Charlottesville, VA					
	PhD July, 2019 - December, 2022.					
	 Mathematics Thesis title: On Higher Turán Inequalities fo T-Designs, and j-Inversion Thesis advisor: Ono, Ken Marvin Rosenblum Professor of Mathematics, University of Virginia. 	r the Plane Partitions, Ellipsoidal , Department of Mathematics,				
	Indian Statistical Institute, Bangalore, India					
	M.Math July, 2017-2019.					
	• Mathematics					
	Indian Statistical Institute, Bangalore, India					
	B.Math(Hons.) July, 2014-2017.					
	• Major: <i>Mathematics</i>					
Papers and						
PUBLICATIONS	• Modular forms and Ellipsoidal T -designs, The	Ramanujan Journal				
		Filintia Dainta (Caranthan Da I				

• 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)				
	 Linear congruence relations for exponents of Borcherds products (Co-author: Mono, A) (submitted) 				
	• Biases among classes of rank-crank partitions modulo 11 Bringmann, K) (submitted)	(Co-author: Prof. Dr.			
Talks	• Biases among classes of rank-crank partitions modulo 11, Number Theory and Combinatorics Seminar UT Tyler	September 26, 2023			
	• Linear congruence relations for exponents of Borcherds products, May 2023 35th Automorphic Forms Workshop, LSU				
	• Inversion of the Modular j-function KSCSTE, Kerala	February 02, 2023			
	• Inversion of the Modular j-function IMSc, Chennai	January 25, 2023			
	• Higher Turán Inequalities for the Plane Partitions Indian Statistical Institute, Bangalore	January 19, 2023			
	 On Higher Turán Inequalities for the Plane Partitions, Ellipsoidal <i>T</i>-Designs, and <i>j</i>-Inversion May, 2022 Graduate seminar, University of Virginia 				
	• Inversion of the Modular j-function NISER, Bhubneswer	May, 2022			
	• Ellipsoidal T-design 18th Nagoya combinatorial seminar	December 17, 2020			
	• Lightning Rounds by graduate students, UVA Undergraduate Math Club	March 03, 2020			

Teaching Experience	• Teaching assistant for Analytic number theory 2, Summer 20 University of Cologne	23
	• Teaching assistant for Analytic number theory, Winter 20 University of Cologne	23
	• Mentor for Directed Reading Program at University of Virginia, Fall 20 University of Virginia	22
	• Teaching Assistant for Research Experiences for Undergraduates at the University of Virginia, Summer 20	ity 22
	• Instructor for Math 1220, A survey of calculus 2, Fall 20 University of Virginia	21
	• Teaching Assistant for Research Experiences for Undergraduates at the Universe of Virginia, Summer 20	ity 21
	• Instructor for Math 1220, A survey of calculus 2, Spring 20 University of Virginia	21
	• Instructor for Math 1210, A survey of calculus 1, Fall 20 University of Virginia	20
	• Teaching Assistant for Research Experiences for Undergraduates at the Universe of Virginia, Summer 20	ity 20
	• Teaching Assistant for Math 3250, Ordinary Differential Equations, Spring 20 University of Virginia	20
	• Grader for Math 3310, Basic Real Analysis, Spring 20 University of Virginia	20
	• Teaching Assistant for Math 2310, Calculus III, Fall 20 University of Virginia	19
	• Grader for Math 4651, Advanced Linear Algebra, Fall 20 University of Virginia	19

Conferences and Workshops

- International Conference on Number Theory & the SASTRA-Ramanujan Award ceremony December 18-23, 2023
- 1st Analytic Number Theory & Automorphic Forms Conference in Patras, July 17-21, 2023
- 35th Automorphic Forms Workshop, May 22-27, 2023
- 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 TIFR Graduate School Admissions Written Exam	2019
	Rank 46 CSIR UGC National Eligibility Test	2018
	Academic fellowship for excellent performance BMath Third year	2017
	Academic fellowship for being second rank holder BMath First year	2014

Refereeing

- Journal of Number Theory
- International Journal of Number Theory
- Research in Number Theory
- The Ramanujan Journal
- Transactions of the American Mathematical Society
- Annals of Combinatorics
- Involve

Extracurricular Activities	• ISI intra-college Cricket tournament winner, Indian Statistical Institute, Bangalore center	2018 & 2023		
	• 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),	${\it Mathematica},$	Octave,	LateX,	С, С	C++,
	html						