

# Vishal Bhardwaj

## Curriculum vitae

Department of Mathematics  
Louisiana State University  
Baton Rouge, LA 70803, USA  
✉ [vbhard3@lsu.edu](mailto:vbhard3@lsu.edu)  
🌐 [vishalmath.github.io](https://vishalmath.github.io)

### Education

- 2023–2028 **Ph.D., Mathematics**, [Louisiana State University](#)  
Advisor: [Prof. Gene Kopp](#)
- 2020–2022 **M.Sc., Mathematics and Computing**, [National Institute of Technology Manipur](#)  
Thesis: Prime divisors in an arithmetic progression and explicit abc-conjecture  
Advisors: [Prof. Shanta Laishram](#) (Indian Statistical Institution, Delhi Center)
- 2016–2019 **B.Sc., Mathematics**, [GD Goenka University, Gurugram, Haryana](#)  
Thesis: A study of hypergeometric functions  
Advisor: [Prof. Smita Sood](#)

### Research Interest

Analytic Number Theory, Elliptic Curves

### Teaching Experience

**Teaching Fellow**, [Plaksha University, Mohali](#)

Spring 23 **FM 131**: Programming and Data Structures

Fall 22 **FM 111**: Computational Thinking

My duties involve planning and completing the semester-long syllabus, guiding students with their programming assignments in the lab, conducting tutorials, and setting and grading quizzes for a class of 98 students.

### Awards and Honors

- 2020 All India Rank 861/13186 at the Indian Institute of Technology Joint Admission test for Masters.
- 2019 Best co-curriculum activities award winner of the School of Basic and Applied Sciences at GD Goenka University.
- 2016–2019 Secured first rank in undergraduate studies at GD Goenka University
- 2016–2019 I was on the Dean's list for academic excellence at GD Goenka University.
- 2016–2019 Recipient of fully funded merit scholarship at GD Goenka University.

### Grants

- July 2022 Travel and living support for [FPSAC](#) at the [Indian Institute of Science, Bangalore \(INR 10248\)](#).

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## Publications and Preprints

- [1] "Seasonal Variation with respect to Water Quality Index of Ghaggar River" (with Smita Sood, Purna Sharma, and Varsha Sharma), November 2018. [[pdf](#)].

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## Research Experience

- Summer 2018 **Intern**, [Indian Institute of Technology Guwahati](#), Assam, India  
Numerical Analysis for Ordinary Differential Equations  
Supervisor: [Professor Natesan Srinivasan](#)
- 2017–2018 **Interdisciplinary Projects**, [GD Goenka University](#), Gurugram, India
- Industrial Input Panel for Blind Operator.
  - Distance Measurement Instrument Using Ultrasonic Sensor in Arduino Uno.
  - Animated LED Cube.
  - Object Counter.
  - Smart Auditorium System.
  - Statistical Analysis of Categories of Bio-Medical Waste in India.
  - Forecasting of Electric Vehicle in India.

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## Summer Schools/Conferences/Workshops

- Mar 2023 **Southern Regional Number Theory Conference ([Online](#))**, LSU.
- Nov 2022 **Bayou Arithmetic Research Days ([Online](#))**, LSU.
- July 2022 **Formal Power Series & Algebraic Combinatorics ([FPSAC](#))**, IISc Bangalore.
- June 2022 **L-functions, Circle-Method and Applications ([Online](#))**, ICTS-TIFR.
- Dec 2020 **Applied Physics and Mathematics**, NIT Manipur.
- Nov 2020 **Recent Trends in Mathematics**, NIT Manipur.
- Oct 2020 **Technical Trends in Mathematics and its Applications**, NIT Manipur.
- Oct 2018 **Recent Developments in Science, Engineering, and Technology**, GD Goenka University.
- Oct 2017 **Recent Developments in Science, Engineering, and Technology**, GD Goenka University.
- Oct 2017 **International Computing and Communication Technologies for Smart Nation**, GD Goenka University.

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## Leadership & Service

- 2020-2022 **Student Member**, Departmental Postgraduate Committee (DPPC), NIT Manipur.
- 2020-2022 **President**, Mathematics Society, NIT Manipur.
- 2021-2022 **Placement Coordinator**, Department of Mathematics, NIT Manipur.

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## Outreach

### Plaksha University, Mohali

#### 2022 – 2023 Admissions and Outreach

My duties involved managing the student's applications and assisting with reports and data extraction.

#### Nov- Dec 22 Young Creators League

My work is to communicate with the students and motivate them to do projects. I was also associated with checking the final project for the grand exhibition.

#### June 2023 Young Technology Scholars

Teaching assistant for Game Design project for high school students.

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## Technical Skills

C/C++, Data Structures, Algorithms, MATLAB,  $\text{\LaTeX}$

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## Community Service

2016-2020 I taught mathematics to underprivileged school students in my village.

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## Language Proficiency

Hindi, English - Fluent in spoken, written, and reading.

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## References

Available on request