

# KANISHAK VAIDYA

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## Academic Achievements and Scholarships

- Granted **PMRF**: January 2020
- GATE (EC) 2018: **AIR 10. GATE Score: 1000**
- **Junior Mathematical Olympiad**: 2011. AIR 30

## Technical Strengths

- **Programming**: Python, Octave/MATLAB, C/C++, Bash scripting
- **Software Tools**: LTspice, LabView, Arduino IDE, SimuLink
- **Miscellaneous**: Linux, SSH, git, LaTeX, Markdown, HTML/CSS, vim, emacs

## Professional Skills

- Research and analysis
- Contextual comprehension
- Efficient team oversight and coordination
- Abstract and critical thinking
- Problem solving
- Proactive and decisive

## Industrial Experience

- **BSNL Mandi**: 45 Day industrial training on *telephone exchange, main distribution frames and switching*.
- **RWIT**: Workshop on wireless technologies, IoT and 5G
- **INMOTC**: KV Dhaula Kuan, Delhi. Focus on Complex analysis, Number theory and geometry

## ABOUT ME

As a Ph.D. fellow in ECE department at IISc Bangalore, my research expertise lies in privacy in wireless cache-aided networks, and distributed machine learning systems. I have strong background in signal processing, coding, and information theory and I've also worked on image processing and computer vision projects.

## RECENT EDUCATION

| Qualification | Institute      | Specialization    | Graduated | CGPA   |
|---------------|----------------|-------------------|-----------|--------|
| PhD           | IISc Bangalore | Communications    | Nov 2023  | 8.9/10 |
| M.Tech        | IISc Bangalore | Signal Processing | Jul 2023  | 8.9/10 |

## RECENT PUBLICATIONS

- K. Vaidya and B.S. Rajan, “**Cache-Aided Multi-User Private Information Retrieval using PDAs**” IEEE TComm, doi:10.1109/TCOMM.2023.3325473.
- K. Vaidya and B.S. Rajan, “**Private Information Delivery with Coded Storage,**” IEEE ISIT 2022, Espoo, Finland, 24 June – 2 July 2022.
- K. Vaidya and B.S. Rajan, “**Distributed Computation: Privacy, Straggler Mitigation, and Security Against Colluding Workers,**” IEEE GLOBECOM 2020 doi: 10.1109/GLOBECOM42002.2020.9322092.
- **Other publications:** [kanishakvaidya.github.io/phd-progress/publications](https://kanishakvaidya.github.io/phd-progress/publications)

## PROJECTS

- **Communications**: OFDM simulation and analysis on Simulink and MATLAB
- **Communications**: Created python modules for finite field operations
- **Computer vision**: Camera rotation and translation from images on python
- **Hobby projects**: Maintain a Linux distribution and package repository
- **Other projects:** [kanishakvaidya.github.io/phd-progress/projects](https://kanishakvaidya.github.io/phd-progress/projects)

## KEY COURSES

|                              |                         |                            |
|------------------------------|-------------------------|----------------------------|
| <b>Digital Communication</b> | Error Control Coding    | <b>Matrix Theory</b>       |
| Wireless Communication       | <b>Random Process</b>   | Detection and Estimation   |
| <b>Space-Time Coding</b>     | Information Theory      | <b>Optimization theory</b> |
| Computer Vision              | <b>Machine Learning</b> | Digital Image Processing   |