

Ishita Chaturvedi

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EDUCATION

Princeton University, Princeton, NJ
Ph.D. in Computer Science, in progress
Advisor: Prof. David I. August

University Of Delhi, New Delhi, India
Bachelors Of Science (Honours) Physics, July 2019

RESEARCH EXPERIENCE

National Initiative for Undergraduate Science Fellow, National Centre for Radio Astrophysics

- Supervisor: Prof. Yashwant Gupta
- Worked on developing and optimizing a Real-Time Radio Transient detecting pipeline in CUDA and C to be integrated into the Giant Meter Wave Radio Telescope Facility. My work focused on Kernel development, optimization and error checking. Dec 2016 – Apr 2019

Undergraduate Researcher, Material Science Lab

- Supervisor: Prof. K.C. Singh
- Worked on understanding theoretical implications of observed results of different ceramic systems for TEM and XRD data for varying stoichiometric ratio, ball milling duration and sintering temperature. Researched on Optimization of the process of sintering of ceramics Aug 2016 – Mar 2019

INDUSTRY EXPERIENCE

Hardware Accelerator, Simyog Technology

- Worked on expediting code by hardware based acceleration methods such as cache optimization and Vectorization. Achieved a speedup of up to 6x on major code bottlenecks. Jun 2019 – May 2020

Arduino based software developer, Atlantis Research

- Wrote arduino based codes as a project to introduce school students to coding and robotics using a hands on approach. Jul 2017 – Oct 2017

RESEARCH PUBLICATION

- Mittal, S., Chaturvedi, I. & Chandramani Singh, Role of Y^{3+} ion substitution in the enhanced electrical properties of $Ba_{(0.9-x)}Y_xCa_{0.1}Zr_{0.07}Ti_{0.93}O_3$ lead-free piezoceramics, Journal of Materials Science: Materials in Electronics, 2019
- Presenter, Expediting EMI/EMC Simulation Using Vectorization, GEMCCON, Bangalore, 2019

AWARDS & SCHOLARSHIPS

- **National Initiative on Undergraduate Science Fellowship** recipient 2016 – 2018
Given to thirty first year undergraduates pursuing Physics or Engineering to carry out fully funded research projects over two years.
- **National Science Day Delhi University Model Presentation Competition** Sri Venkateswara College 2019
First position
- **Turyojas Science Fest Paper Presentation Competition** Deen Dayal Upadhyay College 2019
First position
- **Turyojas Science Fest Model/Poster Presentation Competition** Deen Dayal Upadhyay College 2019
First position

PROFESSIONAL AFFILIATIONS & ACTIVITIES

Ideas, Research and Innovation Society

Sri Venkateshwara College

- Founder and Chair of the first Science based Think-Tank in university to promote undergraduate research and discussion of interesting questions, theorems and proofs.

2016 – 2019

Asian Regional Space Settlement Design Competition

- Mentor teams of sixty international high school students through the duration of the competition. 2016 – Present

Indian National Space Settlement Design Competition

- Mentor teams of sixty Indian high school students through the duration of the competition. 2016 – Present

TALKS

University of Delhi

- *Parallel Programming using CUDA* Aug 2018
- *Data Analysis using GMRT* Aug 2018
- *Sintering mechanism in Ceramics* Apr 2018
- *Special Relativity* Aug 2017

SKILLS

CUDA, Python, C, C++, bash, MATLAB, Scilab