

DISHA SHUR

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Research Interests

Signal Processing, Communication Networks, Optimization over networks, Machine learning for networks

Education

Indian Institute of Engineering Science and Technology, Shibpur **2014–2018**

B.Tech., Electronics and Telecommunication Engineering, First class with Honours
8.34/10

Army Public School, Kolkata **2011–2013**

AISSCE
86.4/100

Army Public School, Chandigarh **2009–2011**

AISSE
10/10

Publication

Disha Shur, K. Yaswanth, Uday K Khankhoje, "Two Dimensional Microwave Imaging Using a Divide and Unite Algorithm", presented at *2017 Progress in Electromagnetics Research Symposium - Fall (PIERS - FALL)*, Nov.2017, published in *IEEE Xplore*

Research Experience

Indian Institute of Science, Bangalore **Feb'19-**

Project Assistant under Dr. Chandra R Murthy

Working on recovering sampling instances and reconstruction using location unaware samples, by adopting meta-heuristic optimization techniques, alongside generalized majorization-minimization algorithms. Extending the concept of Finite rate of innovation in temporal signals to spatial signals.

Indian Institute of Technology, Madras **Jul-Dec'18**

Project Assistant under Dr. Uday K Khankhoje

Adopted techniques of level-set segmentation and subspace minimization technique for inverse imaging via microwave scattering with application to tumor detection.

Indian Institute of Technology, Madras **May-Jul'17**

Research Intern under Dr. Uday K Khankhoje

Developed an adaptive resolution based algorithm for inverse imaging via microwave scattering with application to tumor detection.

Jadavpur University, Kolkata

Dec'16-Jan'17

Research Intern under *Prof. Sayan Chatterjee*

Reviewed and presented a report on Gap waves waveguides as an upcoming transmission technology.

Selected Course Projects

B.Tech Final year project

Aug'17-April'18

under Prof. Dipankar Mukherjee

Performed modelling of solar cells in series and parallel combinations and compared its behavior to a single diode in order to determine the terminal output voltage and current by analysing the model for reverse saturation current and ideality factor.

Digital Image Processing

Jan'18-April'18

under Dr. Ankita Pramanik

Performed implementation of basic image segmentation, compression and filtering techniques on MATLAB as a part of Digital Image Processing Lab.

Cell Phone detector

Jan'17-May'17

6th semester mini-project

Constructed and presented a deploy-ready cell phone detector circuit in a team of 3 for the mentioned curriculum project.

Digital Signal Processing

Jan'17-May'17

under Dr. Ankita Pramanik

Designed FIR and IIR filters for given specifications on MATLAB and C to be implemented on Digital USB Emulator DSK6713 as a part of Digital Signal Processing Lab.

Microprocessors and Microcontrollers

Aug'16-Nov'16

under Dr. Arabinda Roy

Performed various operations using assembly language on 8085 and 8086 microprocessor based microcomputer systems as a part of Microprocessors and Microcontrollers lab.

Skills

Proficient: C, C++, MATLAB, LaTeX, Python

Knowledgeable: MongoDB, Node-Red, Keras, Git

Work Experience

Indian Institute of Science, Bangalore

Jan'19-

Project Assistant, 5G Testbed, Department of Telecommunication

- Working on in-lab 5G testbed by implementing PHY Layer protocols according to 3GPP Release 15 standard, using Open Air Interface, state-of-the-art signal analyzers and USRPs.
- Working on establishing communication with an autonomous vehicle using 5G uRLLC standard.

Indian Institute of Engineering Science and Technology, Shibpur **2015–2016**

Department of Electronics and Telecommunication Engineering

Developed a Python-based software for an inexpensive elementary teaching kit

Indian Institute of Management, Ahmedabad (IIM-A) **Jun-Jul'15**

Scholars For Change 2015

Developed tutorial videos for select concepts in high school Science and Mathematics and contributed the huge pool created by IIM-A as a part of the program.

Achievements

Global Alumni Association of Bengal Engineering and Science University (BESU) (GAABESU) **Sep'17**

Awarded a travel grant to Nanyang Technological University, Singapore to present my work by the alumni association of IEST (Formerly BESU).

Summer Research Fellowship Programme (SRFP) **May'17**

Awarded a research fellowship at IIT Madras for the summer 2017.

Instruo **Feb'16**

Finalist in circuit designing competition WiredIn, at Instruo, annual technical fest of IEST

Kshitij, IIT Kharagpur **Jan'15**

1st in intra-college round, second runner up at the inter-college round at SOE conducted at Kshitij, the techno-management fest of IIT Kharagpur, jointly by Honeywell and Institute of Mechanical Engineers.

Army Welfare Education Society (AWES) **Mar'13**

Girl Child Achiever's scholarship was conferred by AWES due to academic track records.

Co-curricular

- **Former member, IEST Robotics Society:** Conducted classes and competitions for beginners.
- **Former member, IEST Debating Society:** Represented the institute at inter-college debates.
- **Founding member, IEST Literary Society:** Designed the preliminary activities of the society.