

Yawar Hayat Zarkob

✉ yawarz21@iitk.ac.in | 🏠 <https://home.iitk.ac.in/yawarz21/> | 📍 Nanolab, WL-215, IIT Kanpur, India, 208016

Education

Indian Institute of Technology Kanpur

Ph.D. in Microelectronics and VLSI - CPI: 8.70/10

Kanpur, UP

Aug. 2021 - Present

National Institute of Technology, Srinagar

B.Tech. in Electronics and Communication Engineering - CPI: 8.46/10

Srinagar, J&K

Aug. 2017 - July 2021

Senior Secondary Examination | Board: JKBOSE

Crescent Public School - Grade: 96.4%

Srinagar, J&K

2016

Secondary School Examination | Board: JKBOSE

The Legends School of Education - Grade Point: 9.60/10

Srinagar, J&K

2014

Work Experience

SSR, IEEE UP Section

IEEE UP Section

Section Student Representative of IEEE UP section.

Jan. 2023 – Present

- formed and leading student team for IEEE UP Section Student Activity Committee.
- plan and organise events with the purpose of engaging the participants in scientific and educational activities.

Key skills acquired: Management, Leadership

IoT for Industrial Automation

IISc Bangalore

Project was funded by TCS under UAY grant number IISc001

Dec. 2019 – Feb. 2020

- worked under the guidance of **Dr. Rajesh Sundaresan** (Professor, ECE, IISc Bangalore) on implementation of industrial internet of things on an SMT assembly line.
- I got the opportunity of co-presenting the demonstration of the project in the international conference (2020 COMSNETS).

Key skills acquired: Conference Presentation, Research Paper writing, Python

Research Experience

Development of Industry-standard models

IIT Kanpur

BSIM-BULK and BSIM4 model development

Jan. 2022 – Present

- lead developer in BSIM-BULK 107.2.0 beta1 release
- one of the co-developers in BSIM4 4.8.2 release

Key skills acquired: Verilog-A language, ICCAP software, ADS - Keysight, Exposure to industrial and practical research.

Modeling of Organic Thin Film Transistors (OTFTs)

NIT Srinagar

Undergraduate Project | Presented paper in IEEE International Semiconductor conference held in Romania

Aug. 2020 – July 2021

- worked under the supervision of Dr. Sheikh Aamir Ahsan and obtained analytical surface potential expression for OTFTs.
- Project resulted in a research paper which I presented in the IEEE International Semiconductor Conference (CAS) 2021.

Key skills acquired: \LaTeX , Origin, Wolfram Mathematica, MATLAB, Research Paper writing, Conference Presentation.

Publications

- [1] A. Sharma, **Y. H. Zarkob**, R. Goel, C. Dabhi, G. Pahwa, Volker Kubrak, M. Tang, M. Treiber, Chenming Hu and Y. S. Chauhan, "Compact Modeling of Impact Ionization and Conductivity Modulation in LDMOS Transistors", submitted in " *IEEE Transactions on Electron Devices* .
- [2] M. S. Nazir, A. Pampori, **Y. H. Zarkob**, A. Kar and Y. S. Chauhan, " Characterization and Modeling of I-V, C-V and Trapping behavior of SiC Power MOSFETs," *IEEE Electron Devices Technology and Manufacturing Conference (EDTM)*, Seoul, Korea, **Mar. 2023**.
- [3] A. Sharma, **Y. H. Zarkob**, Ravi Goel, Chetan K. Dabhi, Girish Pahwa, Chenming Hu, and Y. S. Chauhan, " Recent Enhancements in the Standard BSIM-BULK MOSFET Model," *IEEE International Conference on Emerging Electronics (ICEE)*, Bengaluru, **Dec. 2022**.
- [4] **Y. H. Zarkob**, S. A. Bhat and S. A. Ahsan, "Analytical Surface Potential Calculation for Organic Thin-film Transistors," *IEEE International Semiconductor Conference (CAS)*, Romania, **Oct. 2021**.

References

• Prof. Yogesh S. Chauhan

Professor,
Department of Electrical Engineering
IIT Kanpur
✉ chauhan@iitk.ac.in

• Dr. Rik Dey

Assistant Professor,
Department of Electrical Engineering
IIT Kanpur
✉ rikdey@iitk.ac.in