

# Nishant Mishra

<https://mishra-nishant.github.io/>

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## PUBLICATIONS

- ***Vancomycin functionalized WO<sub>3</sub> thin film-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria***

Submitted to Biosensors and Bioelectronics on 26 Feb 2019, *Under Review*

## CONFERENCES

- ***Reconstituted Fe-Azurin based device for resistive memory switching***

International Workshop on the Physics of Semiconductor Devices, 2017

## EXPERIENCE

### **Indian Institute of Technology Delhi, New Delhi (India) - *Research Intern***

Dec 2017–Present

- Characterized a Bioimpedance sensor for bacteria detection
- Fabricating and characterizing a Polysaccharide-based Resistive memory device on a flexible substrate
- Characterizing a BioFET sensor for bacteria detection

### **Indian Institute of Technology Delhi, New Delhi (India) - *Research Intern***

Jun 2017– Aug 2017

- Fabricated and characterized a Protein-based Resistive memory device on a flexible substrate

### **Electronics Club IEEE GTBIT, New Delhi (India) - *Member***

Aug 2015–Dec 2017

- Conducted an academic-industry workshop on Renewable Energy Resources
- Conducted a two day Hardware Hackathon
- Taught a Special Interest Group on the Basics of C
- Conducted a technical quiz on IEEE Day 2015
- Conducted mock Group Discussions and Personal Interviews on IEEE Day 2015

## EDUCATION

### **Guru Tegh Bahadur Institute of Technology, New Delhi (India) - *Bachelor's of Technology in Electrical and Electronics Engineering (EQF level 6)***

Aug 2014–May 2018

Affiliated with **Guru Gobind Singh Indraprastha University** *First Division*

## PROFESSIONAL DEVELOPMENT (MOOCs)

### **Primer on Semiconductor Fundamentals** (Audit)

Purdue University (EdX), West Lafayette (United States)

### **Circuits and Electronics 1: Basic Circuit Analysis** ([Certificate](#))

Massachusetts Institute of Technology (EdX), Cambridge (United States)

### **Nanotechnology for Health** ([Certificate](#))

University of Twente (FutureLearn), Enschede (Netherlands)

### **Device Characterization with the Keithley 4200-SCS** (Audit)

Keithley Instruments, Inc (Nanohub), Cleveland (United States)

### **Micro & Nano fabrication (MEMS)** ([Certificate](#))

École Polytechnique Fédérale de Lausanne (EdX), Lausanne (Switzerland)

### **The Arduino Platform & C Programming** ([Certificate](#))

University of California, Irvine (Coursera), Irvine (United States)

## SKILLS

- **Physical Vapour Deposition** using Varian 3117 Thermal evaporator
- **Semiconductor characterization** using Keithley 4200 and 4200A parameter analyzers. Experience with Keithley 2636B, Keithley 2400 SMUs
- **Electrochemical Impedance Spectroscopy** using BioLogic SP-150 Potentiostat
- **Mask designing** using ProjeCAD and IntelliCAD
- **Data analysis and plotting** using Origin 2019
- **Infrared Spectrum analysis** using Thermo Scientific Nicolet iN10MX infrared imaging microscope
- **UV-Vis Spectrum analysis** using Eppendorf Biospectrometer
- **Silver Nanoparticle Synthesis** using chemical & biological methods
- **Basic Object Oriented Programming** using C++

## AWARDS AND HONOURS

- 2016- Second Place in Tesla Turbulence -IEEE GTBIT: Quiz on hardware, networking, electronics, boolean logic, and Computer assembly
- 2010-2012- Second Green Badge for academic excellence for two consecutive years - Delhi Public School, R.K. Puram
- 2006-2009- Scholar Badge for academic excellence for three consecutive years - Delhi Public School, R.K. Puram