

# Nishant Mishra

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## EXPERIENCE

### **ECSens, Enschede (The Netherlands) - Research Intern**

Jul 2020–Dec 2020

- Mask Design using CleWin5
- Amperometric and cyclic voltammetric measurements for impact electrochemistry
- Data analysis of the electrochemical measurements

### **Student Union, University of Twente, Enschede (The Netherlands) - Secretary** *Buddy September 2020 edition*

Jul 2020–Present

- Responsible for external communication and internal meeting minutes of Buddy
- Collecting and managing the data for events

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

Dec 2017–Sep 2019

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

- Organized workshops on Renewable Energy Resources, and the basics of C
- Conducted a two-day Hardware Hackathon
- Conducted a technical quiz and mock interviews on IEEE Day 2015

## PUBLICATIONS

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

[Biosensors and Bioelectronics 136 \(2019\): 23-30](#)

• ***MoS<sub>2</sub>/TiO<sub>2</sub> Hybrid Nanostructure-Based Field-Effect Transistor for Highly Sensitive, Selective, and Rapid Detection of Gram-Positive Bacteria***

[Advanced Materials Technologies \(2019\): 1900615](#)

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

Submitted to the International Workshop on the Physics of Semiconductor Devices, 2017

## EDUCATION

**University of Twente, Enschede (The Netherlands) - Master of Science in Electrical Engineering (EQF level 7)**

Sep 2019 – Present

Specialization: Lab on a chip Systems for Biomedical and Environmental Applications

**Guru Tegh Bahadur Institute of Technology, New Delhi (India) - Bachelor of Technology in**

*Electrical and Electronics Engineering (EQF level 6)*

Aug 2014–May 2018

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

**Delhi Public School, R. K. Puram, New Delhi (India)** - *All India Senior School Certificate Examination (EQF level 4)*

2013-2014

Mathematics, Physics, Chemistry, Computer Science, English

## PROFESSIONAL DEVELOPMENT (MOOCs)

**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)

**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)

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

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

## JOB-RELATED 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

• **Cyclic Voltammetry and Amperometry**

• **Basic Mask designing** using CleWin5, 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

## PERSONAL SKILLS

• **Language Skills**

English - C1 (TOEFL 109)

Dutch - B1

• **Organizational and Managerial skills**

Winter Kick-in 2020 (Introduction week)  
mentor responsible for a group of 10 arriving students

Buddy 2020 mentor helping internationals know more about dutch society

• **Digital Skills**

Managed a Social media page for an Event organized by IEEE GTBIT

## AWARDS AND HONOURS

- 2016- Second Place in Tesla Turbulence -IEEE GTBIT: Quiz on hardware, networking, electronics, boolean logic, and Computer assembly