Nishant Mishra

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DOB: 28-Apr-1996
Nationality: Indian

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PUBLICATIONS

▪ ***Vancomycin functionalized WO_3 thin film-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria***

Biosensors and Bioelectronics 136 (2019): 23-30

▪ ***MoS_2/TiO_2 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
    - Thesis project: Ultrafast expanding microbubble valve array for use in a microreactor to measure sub millisecond reaction kinetics
- Master Research Honours

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)

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

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

Student associations

Student Union, University of Twente, Enschede (The Netherlands) - *Secretary- The Buddy Committee*

Jul 2020–Present

- Responsible for external communication and meeting minutes of Buddy
- Responsible for collecting and managing personal data

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

TECHNICAL 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 chronoamperometry**

▪ **Basic Mask designing** using CleWin5, ProjeCAD, and IntelliCAD

▪ **FInite Element Method Simulations** using COMSOL multiphysics

▪ **Data analysis and plotting** using MATLAB and Origin 2019

▪ **Infrared Spectrum analysis** using Thermo Scientific Nicolet iN10MX infrared imaging microscope

▪ **UV-Vis Spectrum analysis** using Eppendorf Biospectrometer

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