



PRAKASH PANIGRAHI

B.TECH STUDENT

EDUCATIONAL BACKGROUND

National Institute of Science and Technology (Autonomous)

Bachelor of Technology, Electronics and Communication Engg.

- Enrolled since Aug. 2018 to present
- C.G.P.A.: 8.9 (Out of 10)

Khallikote Junior College, Berhampur

Higher Secondary, Science

- Attended from July 2016 to June 2018
- Percentage: 68.4%

St. Xavier's High School, Berhampur

Matriculation, CBSE

- Attended from Apr. 2003 to Apr. 2016
- C.G.P.A.: 9.2 (Out of 10)

EXPERIENCE

Research Assitant

National Institute of Science and Technology, Berhampur

Sept. 2019 to present

- Simulation of Thin-Film Solar Cells
- IoT Technology Research
- Wireless Communication Technique Research

Student Coordinator

National Institute of Science and Technology, Berhampur

Sept. 2019 to present

- Managing groups of students directly

Summer Intern

Indian Institute of Science, Education, and Research, Berhampur

May 2020 to Aug. 2020

- Worked on various Solar Cell simulation programs using MATLAB and Python3.
- Worked with SCAPS-1D.

Teaching Assistant

National Institute of Science and Technology, Berhampur

Oct. 2019 to Dec. 2019

- Helped the professor in their academic activities

Volunteer

India Redefined

Oct. 2018 to Nov. 2018

- Worked as a volunteer for social causes and spreading awareness among the youth for the betterment of society

CERTIFICATION COURSES

- **USING PYTHON TO ACCESS WEB DATA** issued by the University of Michigan via Coursera (November 2020).
- **COMPUTER VISION - OBJECT DETECTION WITH OPENCV AND PYTHON** issued by Coursera (September 2020).
- **INTERFACING WITH THE ARDUINO** issued by the UNIVERSITY OF CALIFORNIA, IRVINE via Coursera (August 2020).
- **THE ARDUINO PLATFORM AND C PROGRAMMING** issued by the UNIVERSITY OF CALIFORNIA, IRVINE via Coursera (August 2020).
- **INTRODUCTION TO THE INTERNET OF THINGS AND EMBEDDED SYSTEMS** issued by the UNIVERSITY OF CALIFORNIA, IRVINE via Coursera (August 2020).

ABOUT ME

I am a B.Tech Student having interests in Material Science, Wireless Communication and Embedded Systems. My objective is to utilize my trainings and skills towards making a significant contribution to the society.

MY CONTACT

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RESEARCH INTERESTS

- Embedded Systems
- IoT Devices
- Wireless Communication
- Solar Cells
- Data Science

LANGUAGES

- English
- Odia (Oriya)
- Hindi
- Japanese

TECHNICAL SKILLS

UV - VIS Spectrophotometer (Shimadzu UV1800) ★★★★★

IV meter (Keithley 2604B) ★★★★★

Vacuum Evaporator (Hind High Vacuum BC300) ★★★★★

RF and DC Sputter (Hind High Vacuum BC300) ★★★★★

LCR meter (Agilent E4980A) ★★★★★

Tunneling Electron Microscope (JEOL JEM 1400 PLUS) ★★★☆☆

HARDWARE SKILLS

Arduino (ATMEGA 328P) ★★★★★

BOLT (esp8266) ★★★★★

Raspberry Pi ★★★★★

NodeMCU (esp8266) ★★★★★

Microprocessors and Microcontrollers ★★★★★

PROGRAMMING SOFTWARE SKILLS

Python ★★★★★

JAVA ★★★★★

ANSI C ★★★★★

MATLAB ★★★★★

SIMULATION SOFTWARE SKILLS

SCAPS 1D ★★★★★

Proteus Design Suite ★★★★★

Discovery SpaceClaim ★★★★★

NI LabVIEW ★★★★★

SIMULINK ★★★★★

MISC. SKILLS

OriginPro ★★★★★

Mendeley ★★★★★

MS Office Suite ★★★★★

- **PYTHON DATA STRUCTURES** issued by the UNIVERSITY OF MICHIGAN via Coursera (August 2020).
- **PROGRAMMING FOR EVERYBODY (GETTING STARTED WITH PYTHON)** issued by the UNIVERSITY OF MICHIGAN via Coursera (August 2020).
- **PCAP: PROGRAMMING ESSENTIALS IN PYTHON** issued by Cisco Networking Academy (April 2020).
- Attended a 200-hour **NANO-ELECTRONICS DESIGN AND FABRICATION COURSE** at N.I.S.T., Berhampur. This course was about nanofabrication technology, design, fabrication, and analysis. Thin-film deposition and its characterization have also been included as a part of this course. We fabricated and characterized flexible MIM and MOS structured devices. We also studied nonvolatile memory technology. Device simulation using Silvaco and SCAPS-1D was also a part of the course (June - July 2019).

ACCOMPLISHMENTS

- **Grand Finalist** of **Toycathon 2021**, in the physical level 2 theme for the project, "VISUALIZER- A COMPLETE SOLUTION" (Jan 2021 - Present).
- **Winner** of **National Level Poster Competition** for UG Engineering Students, "Silicon Technodium 2021" (April 2021).
- **Third Rank** in **SRM Hackathon 5.0** for the theme: Health and Forensics, **Project: Non-Invasive Glucometer** (March 2021).
- **Winner** of **SMART INDIA HACKATHON 2020** under the problem statement **NON-INVASIVE GLUCOMETER** by Department of Science and Technology, Government of India (Mar 2020 - Jan 2021).
- Awarded **first prize** in a quiz on **solar cells** conducted by club ECO-WALKERS in collaboration with IIT BOMBAY (October 2019).
- Recipient of state-sponsored **MEDHABRUTI Scholarship** in Undergraduate degree (Aug 2018 - Present).
- Awarded state-sponsored **MEDHABRUTI Scholarship** during Higher Secondary Schooling (Jan 2016 - Aug 2018).

PROJECTS

- **Visible Light-Based Communication System:** Development of a LED-based transmitter and a Photo-detector based receiver system for data transfer from one device to another via visible light spectrum (July 2021 - Present).
- **Glutor - A Non-Invasive Glucometer:** Developed an IoT enabled breath-based non-invasive glucometer that can accurately measure the blood glucose level without using any blood (Jun 2020 - Present).
- **Python Project: pillow, tesseract and OpenCV:** Manipulating images using the Python imaging library(pillow), applying optical character recognition to images to recognize text (tesseract and py-tesseract), and identifying faces in images using the popular OpenCV library (Aug 2020 - Sep 2020).
- **PDMS based low-cost pressure sensors:** Fabrication of low-cost ZnO Nanoparticles incorporated Polydimethylsiloxane(PDMS)/Porous PDMS stack capacitive pressure sensor, which can be used for low, as well as high-stress monitoring applications (Mar 2019 - Oct 2019).

PATENTS AND PUBLICATIONS

Patents

- Sandipan Mallik, Debasish Panda, **Prakash Panigrahi**, Ajit Dash, "NON-INVASIVE GLUCOMETER TO DETERMINE BLOOD GLUCOSE LEVEL FROM MOUTH-BLOWN AIR AND A METHOD THEREOF", January 2021, Indian patent application (provisional) no: 202131003286
- Sandipan Mallik, Rahul Roy, Gufran Ahmad, Ahmad Raja, Syed Habibur Raheman, Ajit Dash, **Prakash Panigrahi**, Prashant Kumar Singh, Shrabani Guhathakurata, Nabin Baran Manik, Palash Das, Satya Sopan Mahato, "AN AUTOMATED PROBING SYSTEM FOR MEASURING ELECTRICAL CHARACTERISTICS OF ON-WAFER DEVICES AND A METHOD THEROF", September 2020, Indian patent application no: 202031041107.

REFERENCE

Dr. Sandipan Mallik

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Dept. of Electronics and Communication
National Institute of Science and
Technology, Berhampur, Odisha
Email: sandipan@nist.edu
Cell: +91-9658965687

Dr. Prashant Kumar Singh

Associate Professor
Dept. of Electronics and Communication
University College of Engineering and
Technology, VBU, Hazaribagh, Jharkhand
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Journal Publications

- Anupam R. Tripathy, A. Choudhury, Ajit Dash, **Prakash Panigrahi**, S.Sachin Kumar, P.P. Pancham, Sushanta Kumar Sahu, S. Mallik, "Polymer matrix composite engineering for PDMS based capacitive sensors to achieve high-performance and broad-range pressure sensing", Applied Surface Science Advances, Volume 3, 2021, 100062, ISSN 2666-5239, <https://doi.org/10.1016/j.apsadv.2021.100062>

Conference Publications

- S. Mohanty, S. Satapathy, D. Jena, **Prakash Panigrahi**, and S. Mallik, "Pencil-On-Paper Organic MIM Structures for High-Frequency RF Applications", 22nd State Level Annual ISTE Faculty Convention and National Seminar on Recent Innovation and Challenges in Renewable Energy for Nation Building, NIST Technical Souvenir pp-43, National Institute of Science and Technology, Berhampur, India.
- **Prakash Panigrahi**, D. Panda, S. Choudhury, S. Patnaik, D. Deo, S. P. Singh, S. Mallik, and S. S. Mahato, "Towards High-Efficiency CIGS Solar Cell Through Buffer Layer Optimization Using SCAPS-1D", 22nd State Level Annual ISTE Faculty Convention and National Seminar on Recent Innovation and Challenges in Renewable Energy for Nation Building, NIST Technical Souvenir pp-42, National Institute of Science and Technology, Berhampur, India.

Book Chapters

- **Prakash Panigrahi**, Y. Kumar, S. P. Singh, S. Mallik, K. Swain, M. Cherikuri, "IoT Based Resources Management and Monitoring for a Smart City", CRC Press, Taylor & Francis Group, USA. (in press).
- V.R.K. Patro, R.R. Padhi, S.S. Kumar, P.M.K. Patro, **Prakash Panigrahi**, M. Singh, D. Adhikary, K. Kashyap, P. Das, M. Cherukuri, K. Swain, and S. Mallik, "Multi-user Door Access Control System", CRC Press, Taylor & Francis Group, USA. (in press).

DECLARATION

All the information mentioned in the resume is correct to the best of my knowledge and belief.


Signature