

CURRICULUM VITAE



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Career Objective

To work in a competitive and challenging environment which facilitates corporate as well as personal growth through learning and team work

Educational Qualification

- Pursued **Ph.D** from the Department of Instrumentation & USIC, Gauhati University in the month of January 2021
- Pursued **M.Tech** degree in Electronic Design And Technology from Tezpur University
- Pursued **B. E** degree in Electrical engineering from Jorhat Engineering College.

Name of the examination	Name of the institution	Name of the Board/ University	Marks Secured (Percentage)	Division	Year of passing
AISSE	Kendriya Vidyalaya Khanapara	CBSE	77.4%	1 st	2003
AISSCE	Kendriya Vidyalaya Khanapara	CBSE	76.4%	1 st	2005
B.E	Jorhat Engineering College	Dibrugarh University	81.2%	1 st	2010
M.Tech	Tezpur University	Tezpur University	93.6%	1 st	2012

Projects

Ph.D Project Title

Design of ZnO nanomaterial based Biosensor to be used for diagnosis of biological parameters in case of animal and bird-

A low cost hand-held ZnO based sensing device has been successfully designed for testing blood serum of bovine (cow), avian (poultry) and

Personal Data:

Mother's Name:
Mrs.Gita Dewan

Father's Name :
Dr.Jitendra Nath Dewan

Date of Birth :20.05.1988

Sex : Female

Nationality :Indian

Mother tongue : Assamese

Religion : Hindu

caprine (goat) to diagnose their health of liver and kidney by detecting four biological parameters in-situ. Nanostructured Zinc oxide (ZnO) solution is synthesized using the chemical bath deposition method. Using transmission electron microscopy (TEM) and X-ray diffraction (XRD), the size of ZnO nanoparticles were determined. It shows a hexagonal wurtzite structure with an orientation along the direction (101). The size of ZnO nanoparticle is 0.004nm as obtained from XRD. ZnO based sensing device is designed with the help of Arduino and Microsoft visual basic 6.0 version software. The resistance of blood serum is taken into consideration for carrying out the experiment. It has been measured after adding (1µl) ZnO to (1ml) of blood serum to detect four biological parameters – Serum glutamate pyruvate transaminase (SGPT), Serum glutamic-oxaloacetic transaminase (SGOT), Blood urea nitrogen (BUN) and creatinine of bovine, avian and caprine more precisely. The device can indicate whether the blood serum of bovine, avian and caprine have normal/diseased parameters. This device will also help the veterinarians in the field.

Publication:**Journal:**

- Sumi Kankana Dewan, Santanu Bardaloi, "Design of Sensing Device for Detection of Disease in Bovine, Avian and Caprine", International Journal of Advanced Science and Technology, vol.28(8), pp.254-267, October 2019.
- Sumi KankanaDewan, Santanu Bardaloi, "Resistance measurement of Blood serum of Bovine, Avian and Caprine", International Journal of Physical and Social Science, vol.8(8), pp.32-41, August 2018.
- Nimisha Dutta, Sumi Kankana Dewan, Manabendra Bhuyan,"System Identification of MOS Gas sensors and stability analysis",Sensors and Transducers, vol.143, pp. 127-135, August 2012.

Book Chapter:

- Sumi Kankana Dewan, "Device diagnosing health of Bovine",Intech Open, doi:10.5772/intechopen.99286.

M.tech Project Title:

An Intelligent MOS Gas sensor with fault detection and noise compensation-

MOS gas sensors are mostly used for detecting different gases at different temperatures for different concentrations. But the present work concentrates on the comparison of two identical MOS gas sensors. Data from the electrical circuit are taken through a DAQ card and are saved in Lab VIEW .Response of both the sensors are displayed in Lab VIEW 8.0 .Experiments on sensor fault detection are also performed .Different fault detection schemes are adopted to find out the reason behind the occurrence of fault in the sensor. Besides this,study have been done for the immunity of the sensor to noise by following different schemes. Experimental validation of noise immunity of two identical MOS gas sensor have been performed using the concept of Wheatsone Bridge circuit interfaced with mos gas sensor.

B.E Project Title:

Fuzzy Logic Based System Modeling by using MATLAB software –

System modeling can increase reliability and reduce development cost by making it easier to build systems, to reuse previous built components within new systems, to change systems to suit changing requirements such as functional enhancement and platform changes, and to understand systems. The identification problem is to infer relationships between the past data and future ones of unknown time series and dynamical systems. The ultimate goal is to provide a time dependent model approximating the behavior of the system generating the data.

Training And Industrial Exposure & Experience

- Study of the substation equipments and transmission and distribution of electrical power at ASEB,KAHILIPARA,GUWAHATI
- Teaching experience of 1 year in Tezpur university in 2011-2012
- Teaching experience of 9 years and 3 months in Royal Global University as Assistant Professor

Computer skills

Programming languages: C,C++, Matlab, Xilinx, Multisim, Lab VIEW 8.0

Achievements

- Awarded with gold medal for pursuing 1st Class 1st position in pursuing M.Tech degree from Tezpur University
- Awarded with gold medal for pursuing 1st Class 1st position (Hons.) in pursuing B.E degree from Jorhat Engineering College
- Cleared GATE-2010 and 2011 in Electrical Engineering discipline
- Gate Scholarship Holder by AICTE,India
- Merit Scholarship holder by Director of Technical Education, Guwahati , Assam
- Cleared UGC-NET December, 2015

Extra-Curricular Activities

- Diploma Holder in Classical dance (Bharatnatyam)
- Interested in sports events
- Examination Conduction Committee member for the examinations held under Gauhati University, ASTU and Royal Global University
- Experienced in administrative activities- admission process, syllabus making

Areas of interest

- Instrumentation, Control system

References

1. **Dr. Manabendra Bhuyan (Professor)**

Department of Electronics & Communication Engineering
School of Engineering

Tezpur University

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2. **Dr. Biswajit Banerjee (Professor)**

Royal School of Engineering & Technology

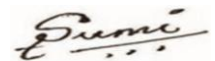
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I hereby declare that the information furnished above is true to the best of my knowledge.



Place: GUWAHATI, ASSAM

Date : 28.1.2022

(Sumi Kankana Dewan)





