Faculty Profile

1. Name: Dr. Praveen Kumar Sahu, Assistant Professor

2. Department: Electronics & Communication Engineering

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   B.I.T. Sindri
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6. Qualification:

S. No.	Degree (UG, PG, PhD)	Specialization	Institute	Year
1	Ph. D	Microelectronics Engineering	IIT (BHU), Varanasi	2020
2	M. Tech	Microelectronics Engineering	IIT (BHU), Varanasi	2013
3	B.E	Electronics & Communication Engineering	Oriental Institute of Science & Technology, Bhopal	2011

7. Area of Specialization: Microelectronics & VLSI

8. PhD (Guided): 02 (ongoing)

9. Subjects Taught:

I) UG:

1. Solid State Devices & Physics
2. Analog Electronics
3. Analog & Digital Communication
4. Digital Electronics & Logic Design
5. Satellite Communication
6. VLSI Design

II) PG:

1. Electronic Measurement & Instrumentation

10. Professional Experience:

I) Teaching Experience:

Sl. No.	Position held	Name of Organization	from	to
1	Assistant Professor	BIT Sindri	18.02.2022	Till date
2	Assistant Professor	MCE Motihari	17.04.2018	17.02.2022
3	Assistant Professor	BIT Sindri	02.01.2018	16.04.2018
4	Assistant Professor	GITM Farrukhnagar	August,2013	April, 2014

II) Research Experience:

Sl. No.	Position held	Name of Organization	from	to

III) Industrial Experience:

Sl. No.	Position held	Name of Organization	from	to

11. Publications:

I)InternationalJournal:

Sl. No.	Title of the paper	Name of the journal in which publication has been made	Vol/No.	Publication Year	Pages
1	"Air-stable vapor phase sensing of ammonia in subthreshold regime of poly(2,5-bis(3-tetradecylthiophen-2yl)thieno(3,2-b)thiophene) based polymer thin-film transistor"	*Sensors and Actuators B: Chemical*	Vol. 246	July 2017	243-251
2	"Optimized hydrogen sensing characteristic of Pd/ZnO nanoparticles based Schottky diode on glass substrate"	*Materials Research Express*	vol. 4, no. 10	Oct. 2017	105014
3	"Electrical and NO_2 sensing characteristics of Pd/ZnO nanoparticles based Schottky diode at room temperature"	*Materials Research Express*	vol. 4, no. 12	Dec. 2017	125017
4	"Fast grown self-assembled polythiophene/graphene oxide nanocomposite thin films at air-liquid interface with	*Journal of Materials Chemistry C*	vol. 6, no. 37	Sept. 2018	9981-9989

	high mobility used in polymer thin film transistors”				
5	“Sol-gel spin coating assisted room temperature operated nanostructured ZnO ethanol sensor with behavior transformation”	*Journal of Sol-Gel Science and Technology*	vol. 88, no. 2	Oct. 2018	322-333
6	"Influence of alumina and silica addition on the physico-mechanical and dielectric behavior of ceramic porcelain insulator at high sintering temperature"	Boletín de la sociedad española de cerámica y vidrio		2018	
7	"Effect of ZrO_2 on the sintering behavior, strength and high-frequency dielectric properties of electrical ceramic porcelain insulator"	*Materials Research Express*		2018	
8	“Fast Development of Self-Assembled, Highly Oriented Polymer Thin Film and Observation of Dual Sensing Behavior of	*Macromolecular Chemistry and Physics*	vol. 220, no. 11	Apr. 2019	1900010

	Thin Film Transistor for Ammonia Vapor"				
9	"Polymer/Graphene oxide nanocomposite thin film for NO_2 sensor: An in situ investigation of electronic, morphological, structural, and spectroscopic properties"	*Scientific Reports*	vol. 10, no. 1	Feb. 2020	
10	"MoS_2 Assisted Self-Assembled Poly(3-hexylthiophene) Thin Films at an Air/Liquid Interface for High-Performance Field-Effect Transistors under Ambient Conditions"	*The Journal of Physical Chemistry C*	vol. 124, no. 15	Mar. 2020	8101-8109
11	"Fabrication and characterization of P3HT/MoS2 thin-film based ammonia sensor operated at room temperature"	*IEEE Sensors Journal*	vol. 22, Issue: 11	Apr. 2022	10361-10369
12	"Facile controlled synthesis of bifunctional ZnO nanoparticles for application as a high-performance self-powered UV photosensor and highly	*Materials Science and Engineering: B*	vol. 293	July 2023	116470

	selective vapor sensor"				

II) International Conference:

Sl. No.	Title of the paper	Name of the Conference in which publication has been made	Vol/No.	Publication Year	Pages
1	"High performance Multi Threshold voltage level converter for multi-V_{DD} systems"	*Students Conference on Engineering and Systems, SCES 2013, MNNIT Allahabad.*		2013	
2	"Clock distribution tworks-A case study using multi V_{DD} and multi reshold level converters",	*IEEE International Conference on Signal Processing, Computing and Control (ISPCC), 2013, JUIT Shimla.*	*no. 2*	*2013*	*1-4*
3	"Ground bounce noise minimization using Multi-V_{DD} Level Converter"	*IEEE International Conference on Electronics, Computing and Communication Technologies, 2014, IISc Bangalore.*		*2014*	
4	"Design and Simulation of Low Leakage SRAM CELL"	*Third International Conference on Devices, Circuits and Systems (ICDCS'16)*, 2016, *Karunya University, Coimbatore.*		*2016*	*73–77*
5	"Synthesis of Na Doped ZnO Nano-Particles for Detection of Reducing Gases"	*IEEE Uttar Pradesh Section International Conference on Electrical, Computer and Electronics Engineering (UPCON), 2016, IIT (BHU), Varanasi.*		*2016*	*102–105*

6	"Development of nanocrystalline ZnO-SnO_2 composite based platform for gas sensing applications"	*IEEE Uttar Pradesh Section International Conference on Electrical, Computer and Electronics Engineering (UPCON), 2016, IIT (BHU), Varanasi.*		*2016*	*142–145*
7	"Development of highly stable non-invasive ammonia sensor for the detection of sub-ppm level concentration of ammonia"	*ICNME 2016, Japan.*		*2016*	
8	"Design of DRAM sense amplifier using 45nm technology",	*International Symposium on Devices, Circuits and Systems (ISDCS), IIEST Shibpur.*		*2018*	
9	"Enhanced Sensing Performance of Nanostructured SnO_2 Sensor Through Oxygen Plasma Treatment"	*IEEE SENSORS, New Delhi, India.*		*2018*	
10	"Design and Analysis of Low Leakage SRAM cell at 45nm Technology"	*GUCON 2019, Greater Noida, India.*		*2019*	

II) National Journal:

Sl. No.	**Title of the paper**	**Name of the journal in which publication has been made**	**Vol/No.**	**Publication Year**	**Pages**

IV) National Conference:

Sl. No.	Title of the paper	Name of the Conference in which publication has been made	Vol/No.	Publication Year	Pages

12. Patents (Filed / Granted)

S. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Status (Filed / Granted)
1	**P. K. Sahu**, Devesh Mishra, Gopal Rawat, C. S. Singh Chandal	"(PETS-NET) IOT enabled petroleum sensor network for detecting and locating leakage of a pipeline in environmental application"	**Indian Patent** application no. 202131007171 A	2021	Publication Date: 19.03.2021
2	Gopal Rawat, C. S. Singh Chandal, Devesh Mishra, **P. K. Sahu**	"Development of a modular hall effect-based sensor network for pipeline integrity monitoring"	**Australian Patent** application no. 2021101442	2021	Publication Date: 28.04.2021
3	Devesh Mishra, Supriya Jaiswal, C. S. Singh Chandal, Gopal Rawat, **P. K. Sahu**	"(PETS-NET) IOT enabled petroleum sensor network for detecting and locating leakage of a pipeline in environmental application"	**Indian Patent** application no. 202111036906 A	2021	Publication Date: 03.09.2021

13. Conference/ Workshop/Seminar/ Organized

Sl. No.	Title of Seminar / Conferences / Short – term Courses	Funding / Sponsoring Agency	Date of Seminar / Conferences / Short – term Courses

1.	Industry Relevant Embedded System Design using Proteus VSM Software	TEQIP-III, MCE Motihari	18th – 19th Sept. 2018.

14. Symposium/ Workshop/Seminar/ Attended

Sl. No.	Title of Symposium/ Workshop/Seminar/ Short – term Courses	Date	Organizing Institute
1.	Summer Training Program on Active Learning for Senior Faculty	02-06th June, 2018	IIT Kanpur
2.	Smart Sensors and Systems: From Simple Sensing to Internet of Things (IoT) & Cyber Physical Systems (CPS)	22-27th October, 2018	IIT (BHU), Varanasi
3.	Materials Characterization for Engineers	24-29th December, 2018	IIT (BHU), Varanasi
4.	STTP on "**Induction Phase - I"**	13-24th January, 2020.	NITTTR, Bhopal
5.	STTP on "**Induction Phase - II"**	29-07th July, 2020.	NITTTR, Bhopal
6.	Management Development Programme on "**Professional Development Training Programme for TEQIP institutions"**	25-30th January, 2021.	IIM Kozhikode

15. Administrative Position Held:

Sl. No.	Position held	Name of Organization	from	to
1	**Nodal officer finance, TEQIP-III**	**MCE Motihari**	**25.01.2018**	**17.02.2022**
2	**BURSAR CUM CFMS CHECKER**	**Do**	**14.05.2020**	**17.02.2022**
3	**Assistant Registrar (Finance)**	**Do**	**24.08.2020**	**17.02.2022**
4	**APIO**	**Do**	**24.08.2020**	**17.02.2022**
5	**Coordinator, IQAC**	**BIT Sindri**	**August, 2012**	**Till date**

16. Award / Recognition Bestowed on Faculty (State / National / International)

- **Qualified in** Graduate Aptitude Test in Engineering (GATE) - 2011. All India rank was 881 in the Subject EC (Percentile: above 99).

- **Qualified** UGC-NET held on **Dec. 2012** for the post of **JRF**.
- **Secured second rank** the class in **Xth and XIIth standard**.
- **Junior Research Fellowship (NET-JRF**) from University grant commission (UGC), India, 2014.
- **Teaching Assistantship (TA**) from Indian Institute of Technology (BHU), Varanasi, India.
- **Successfully completed** eight (08) module MOOC certification courses from NITTT as prescribed by All India Council for Technical Education (AICTE) for new faculty members.

REVIEWER:

IEEE Transaction on Nanotechnology,

Nanotechnology (IOP Publishing),

Physica Scripta (IOP Publishing).

17. Members of Professional Bodies: