BIO-DATA

1. Name andfullcorrespondenceaddress Faculty Apartment- **Dr. Sanjay Kumar Jana**
Ravangla Campus,
NIT Sikkim, Pin- 737139, India

2. Email(s) and contact number(s) skjnit@nitsikkim.ac.in, skjiit@gmail.com
India Phone: 91-9647658649

3. Institution National Institute of Technology (NIT) Sikkim

4. Date of Birth November 08, 1979

5. Gender (M/F/T) M

6. Category Gen/SC/ST/OBC Gen

7. Whether differently abled(Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

Sl. No.	Degree	Year	Subject	University/Institution	%ofmarks
1.	B.Sc	2001	Electronics	Vidyasagar University, West Bengal, India	67% 1st Class)
2.	M.Sc	2003	Electronics	Vidyasagar University, West Bengal, India	66.5% (1st Class)
3.	M.Tech	2007	Nano science and Technology	Jadavpur University	7.76 CGPA (1st Class).
4.	Ph.D	2015	Structural Characterization of Nitride/Arsenide Compound Semiconductors on Si for Optoelectronic Applications	Indian Institute of Technology Kharagpur	

9. Ph.D. thesis title, Guide's Name, Institute/Organization/University, Year of Award.

PhD. Thesis title: "**Structural Characterization of Nitride/Arsenide Compound Semiconductors on Si for Optoelectronic Applications"**

Supervisors:

1. **Dr. Dhrubes Biswas**
   Professor, Department of Electronics & Electrical Communication Engineering
   Indian Institute of Technology Kharagpur, West Bengal, India
2. **Dr. Soumen Das**
   Professor, School of Medical Science and Technology
   Indian Institute of Technology Kharagpur, West Bengal, India

Institute: IIT Kharagpur
Year of Award: 2015

10. DETAILS OF PH. D. CANDIDATES

S. No.	Name of Candidate	Supervisor/ Co-supervisor	No. of Co-supervisor	Title of Thesis	Status Submitted/ Awarded	Year
1	Dr. Hemant Kumar Kathania	Co-supervisor	01	"Roll of prosodic Features and Prosody Modification in Improving Children's Mismatched ASR"	Awarded	2018
2	Dr. Surajit Kundu	Supervisor	-	"Design, development and Performance Evaluation of Ultra-Wideband Printed Antennas with Radiation Improvement for ground Penetrating Radar Application"	Awarded	2018
3	Dr. Reshmi Dhara	Supervisor	01	"Design, Development and Performance Evaluation of Printed Antennas With Polarization Diversity And Multiband Characteristics For Wireless Communication Application"	Awarded	2020
4	Mr. Subhanil Maity	Supervisor	-	"Design of Power and Area Optimised High-Speed Frequency Divider"	Submitted	2021
5	Miss Nigidita Pradhan	Supervisor	-	Design and analysis of phase-frequency detector and charge pump for phase-locked loop application	Submitted	2022
6	Mrs. Priti Gupta	Supervisor	-	Design of transconductance-capacitance based loop filter for PLL application	Submitted	2022
7	Mr. Keshab Das	Supervisor	-	Design of LCVCO	Ongoing	-
8	Mr. Arnab Som	Supervisor	-	Design and optimization of semiconductor Devices towards circuit application	Ongoing	-

11. Work experience (inchronologicalorder).

Sl.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Assistant professor and HOD, Department of ECE	NIT Sikkim	31/12/2015	Till date	Basic Rs. 1,07,000/-
2.	Senior Research Fellow	IIT, Kharagpur	2010	2015	Fellowship@ Rs. 20,000/-
3.	Lecturer	Birbhum Institute of Engineering and Technology	21/08/2007	22/11/2010	@Rs. 16,000/-

12. Publications *(Listof papers publishedin SCI Journals, in yearwise descending order).*

Sl.No	**Author(s)/Co-Authors**	**Title**	**Name ofJournal**	**Volume**	**Page**	**Year**
1.	Dr. S.K Jana ,et al.	Power and area-efficient static current mode logic frequency divider in 180-nm complementary metal-oxide-semiconductor technology	International Journal of Circuit Theory and Applications	DOI: 10.1002/cta.3081	DOI: 10.1002/cta.3081	June 2021
2.	Dr. S.K Jana ,et al.	Design of High Gain Folded Cascode OTA-Based Transconductance–Capacitance Loop Filter for PLL Applications	Journal of Circuits, Systems and Computers	DOI: 10.1142/S0218126621502637	DOI: 10.1142/S0218126621502637	May 2021
3.	Dr. S.K Jana ,et al.	Design of Phase frequency detector with improved output characteristics operating in the range of 1.25 MHz-3.8 GHz	Analog Integrated Circuits and Signal Processing	DOI: 10.1007/s10470-020-01779-7	DOI: 10.1007/s10470-020-01779-7	January 2021
4.	Dr. S.K Jana ,et al.	OFF-State Leakage and Current Collapse in AlGaN/GaN HEMTs: A Virtual Gate Induced by Dislocations	IEEE Transactions on Electron Devices	65, no-4	1333-1339	2018

	Dr. S.K Jana ,et al.	An alternative X-ray refractive analysis for comprehensive determination of Structural properties in Compositionally Gradded Strained AlgaN epilayers	Electronics Materials Latter	14,no-6	784-792	2018
5.	Dr. S.K Jana ,et al.	A high gain dual notch compact UWB antenna with minimal dispersion for ground penetrating radar application	Radio Engineering	27, no. 4	990-997	2018
6.	Dr. S.K Jana ,et al.	Gain enhancement of a printed leaf shaped UWB antenna using dual FSS layers and experimental study for ground coupling GPR applications	Microwave and Optical Technology Letters	60, no. 6	1417-1423	2018
7.	Dr. S.K Jana ,et al.	A compact umbrella-shaped UWB antenna with gain augmentation using frequency selective surface	Radio Engineering	27, no. 2	448-454	2018
8.	Dr. S.K Jana ,et al.	Leaf-shaped CPW-fed UWB antenna with triple notch bands for ground penetrating radar applications	Microwave and Optical Technology Letters	60, no. 4	930-936	2018
9.	Dr. S.K Jana ,et al.	A leaf-shaped CPW-fed UWB antenna for GPR applications	Microwave and Optical Technology Letters	60, 4,	941-945	2018
10.	Dr. S.K Jana ,et al.	A compact umbrella shaped UWB antenna for ground-coupling GPR applications	Microwave and Optical Technology Letters	60, no. 1	146-151	2017
11.	Dr. S.K Jana ,et al.	Reverse bias leakage current mechanism of AlGaN/InGaN/GaN heterostructure	Electronic Materials Letters	12, Issue 2,	232-236	March 2016
12.	Dr. S.K Jana ,et al.	On the different origins of electrical parameter degradation in reverse-bias stressed AlGaN/GaN HEMTs	Phys. Status Solidi			2016
13.	Dr. S.K Jana ,et al.	Structural, Optical and Transport Properties of AlGaN/GaN and AlGaN/InGaN Heterostructure on Sapphire Grown by Plasma Assisted Molecular Beam Epitaxy	J. Vac. Sci. Technol. B	33, No. 4	041206,	2015

14.	Dr. S.K Jana ,et al.	Growth and Characterization of Self Assembled InAs Quantum Dots on Si (100) for Monolithic Integration by MBE	IEEE Transactions on Nanotechnology	13, No. 5	917-925	Sept. 2014.
15.	Dr. S.K Jana ,et al.	High-resolution X-ray diffraction analysis of $Al_xGa_{1-x}N/In_xGa_{1-x}N$/GaN on sapphire multilayer structures: Theoretical, simulations, and experimental observation	J. Appl. Phys.	115	174507	2014.
16.	Dr. S.K Jana ,et al.	Effects of threading dislocations on drain current dispersion and slow transients in unpassivatedAlGaN/GaN/Si heterostructure field-effect transistors	Appl. Phys. Lett.	105	073502	2014
17.	Dr. S.K Jana ,et al.	An unified analytical model for design consideration of doped cubic and undoped hexagonal AlGaN/GaN MIS gate HEMTs	Solid-State Electronics,	96	1–8,	2014
18.	Dr. S.K Jana ,et al.	Evolution and analysis of nitride surface and interfaces by statistical techniques: A correlation with RHEED through kinetic roughening,	Electron. Mater. Lett,	11, No. 4.	707-716	(2015),
19.	Dr. S.K Jana ,et al.	Graded Barrier AlGaN/AlN/GaN Heterostructure for Improved 2DEG Carrier Concentration and Mobility,"	Electron. Mater. Lett.	Vol. 10, No. 6	1087-1092	2014.
20.	Dr. S.K Jana ,et al.	Comparison of different pathways in metamorphic graded buffers on GaAs substrate: Indium incorporation with surface roughness	Appl. Surf. Sci	324	pp-304-309	2015
21.	Dr. S.K Jana ,et al.	“Enhancement of two dimensional electron gas concentrations due to Si3N4 passivation on Al0.3Ga0.7N/ GaN heterostructure: strain and interface capacitance analysis	AIP ADVANCES	5	047136	2015
22.	Dr. S.K Jana ,et al.	Comprehensive strain and band gap analysis of PA-MBE grown AlGaN/GaN heterostructures on sapphire with ultra-thin buffer,	AIP Advances	4	117120	2014
23.	Dr. S.K Jana ,et al.	Comparative HRXRD analysis of GaN/AlGaN heterostructure on Al_2O_3 and Si (111) substrate grown by PAMBE	MRS Proceedings		1754	2015

13. Books/Reports/Chapters/General articles etc.

Sl.No	Title	Author's Name	Publisher	Year of Publication
1.	A Divide-by-5 Pre-Scaler Design Approach for 5G Applications	Dr. S.K Jana et al.	Springer	2021
2.	Design of Dynamic Threshold OTA-Based Transconductance-Capacitance Loop Filter for PLL Applications	Dr. S.K Jana et al.	Springer	2021

14. AnyotherInformation (maximum 500 words)

Dr. Sanjay kr. Jana was born in Purba Medinipur, West Bengal in India on 8th November 1979. He received the B.Sc. and M.Sc. degree in Electronic Science from Vidyasagar University in 2001 and 2003 respectively. He did the M. Tech in Nanoscience and Technology from Jadavpur University, West Bengal, India in 2007. Then he was serving as a Lecturer in Department of ECE. Birbhum Institute of Engineering and Technology, SURI, P.O-SURI, Dist Birbhum, India, for, Period-21/08/07 to 22/11/2010. Then he did his Ph. D program on III-N/As heterostructures, growth and characterizations at Indian Institute of Technology Kharagpur, India in 2015. Presently, he is serving as an Assistant Professor and HOD, Department of Electronics and Communication Engineering, National Institute of Technology Sikkim, India. He has rich experience in the field of devices and design of Application Specific Integrated Circuit in CMOS platform. He has hands-on experience in EDA tools like Cadence, Synopsys and Mentor Graphics. Presently involved in SMDP-C2SD project at NIT Sikkim.

Dr. Sanjay kr. Jana has published peer reviewed journals like IEEE Transaction on Electron Devices, IEEE Transaction on Nanotechnology, Journal of applied physics, Applied Physics Letter, JVST B, Applied Surface Science and presented papers in national and international conferences.He has organized and attended several workshops, Faculty Development Programme and Instruction Enhancement Programmme in the Field of Mixed Signal and RFIC design sponsored by MeitY, Govt. of India.