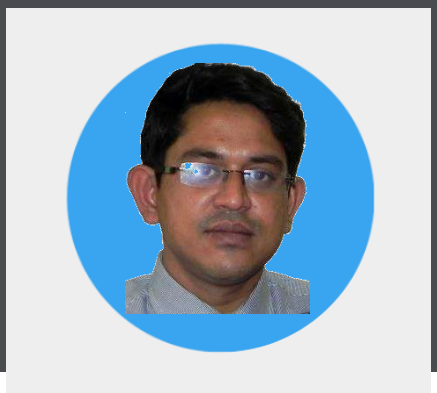
BIO-DATA



MRINAL SEN

Assistant Professor, Department of Electronics Engineering,
Indian Institute of Technology (ISM) Dhanbad

PROFILE

"I'm presently working as an Associate Professor in the Department of Electronics Engineering, Indian Institute of Technology (ISM) Dhanbad. My expertise focuses to Silicon Photonics and Photonic Integrated Circuits. Additionally, I also work in the fields of Embedded System and Artificial Intelligence. Nevertheless, my uttermost passion is teaching and exchanging thoughts with my students."

PERSONAL DETAILS

Name: Mrinal Sen
Gender: Male
Date of Birth: 15th March 1980
ORCID iD: 0000-0002-2332-2753
Web of Sc. Researcher ID: AAC-6763-2020

ADDRESS: Department of Electronics Engineering, Indian Institute of Technology (ISM) Dhanbad, Jharkhand, India, Pin-826004
PHONE: 03262235274 (Office), +91 9471191435 (Mobile)
EMAIL: mrinalsen@iitism.ac.in, mrinal.sen.ahm@gmail.com
WEBSITE: https://www.iitism.ac.in/dept/ece/facultydetail.php?id=OTI0

ACADEMIC QUALIFICATION

2011 - 2014 — **DOCTOR OF PHILOSOPHY**
Department of Electronics Engineering, Indian School of Mines, Dhanbad
[Presently - Indian Institute of Technology (Indian School of Mines), Dhanbad]
Thesis Title: *Stimulated Raman Scattering Based Ultra-Fast All-Optical Logic Inverter*
Name of the Ph.D Guide: *Dr. Mukul Kumar Das, Associate Professor, Deptt. of ECE, IIT(ISM) Dhanbad*

2006 - 2008 — **MASTER OF ENGINEERING**
Jadavpur University, Kolkata, West Bengal, India

1997 - 2001 — **BACHELOR OF TECHNOLOGY**
Institute of Engineering and Management, University of Kallyani, Kalyani, West Bengal, India

PUBLICATIONS

- **International Journals –43**
- **International Conferences – 25**
- **National Conferences/Symposium – 02**
- **Book Chapters – 01**

PROJECTS UNDERTAKEN AS PI

June, 2018 - Dec, 2019 — **Perception Informed by Navigation for Search and Rescue** : Funded by CAIR Lab, DRDO

Jan, 2017 - Jul, 2017 — **Design of Low-Cost Electronic Sensors for monitoring Different Types of Hazardous Gasses** : Funded by TEQIP - II

EXPERIENCE

April, 2021 - Now — **ASSOCIATE PROFESSOR**
Department of Electronics Engineering, IIT (ISM) Dhanbad, India

Nov, 2010 – April, 2021 — **ASSISTANT PROFESSOR**
Department of Electronics Engineering, IIT (ISM) Dhanbad, India

Sep, 2008 - Oct, 2010 — **SENIOR LECTURER**
Electronics and Communication Engineering Department, Birbhum Institute of Engineering and Technology, Suri, Birbhum, West Bengal, India

Jan, 2003 - Sep, 2008 — **LECTURER**
Electronics and Communication Engineering Department, Birbhum Institute of Engineering and Technology, Suri, Birbhum, West Bengal, India

Complete CV of… Dr. Mrinal Sen

Assistant Professor
Department of Electronics Engineering
Indian Institute of Technology (Indian School of Mines), Dhanbad, Jharkhand, India, Pin- 826 004

Phone +91-326-2235657
+91-9471191435
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mrinalsen@iitism.ac.in

Other Academic Information

Courses taught: Microprocessor, Embedded Systems, Optical Communication, Basic Electronics, Digital Electronics, Database Management Systems, Measurements and Instrumentation, Photonic Integrated Circuits.

Post Graduate Projects supervision: 23

Ph. D. Supervision

Completed: 08, On-going: 03

Details of Research work and funding from external agencies:

Sl. No.	Title	Name of all PI/Co-PI etc.	Role	Sponsoring Authority	Sanctioned Amount
1.	Quantum Algorithms for Power Systems & Grid Security	PI: Gauri Shankar Co. PI: Mrinal Sen	Co-PI	MeitY	USD 13000
2.	Design and Development of Prototype of Bronchoscopy	PI: Gauri Shankar Co-PI: Mrinal Sen Co-PI: Dr. T. Kumar	Co-PI	DST (BDTD)	Rs. 1668842/-
3.	Perception Informed by Navigation for Search and Rescue	PI: Mrinal Sen Co. PI: Debjani Mitra	PI	CAIR Lab, DRDO	Rs. 2734000/-
4.	Design of Low-Cost Electronic Sensors for monitoring Different Types of Hazardous Gasses	PI: Mrinal Sen	PI	TEQIP – II	Rs. 200000/-

Details of research papers published in SCI/SSCI/SSCIE Journals:

Sl No.	Authors	Title of paper	Journal	Volume	Page	Indexed in (SCI/SSCI/SCIE/SCOPUS etc.) with date of acceptance
1.	Kamanashis Goswami, Haraprasad Mondal and **Mrinal Sen**	Design of all optical logic half adder based on holes-in-slab photonic crystal	Optical and Quantum Electronics	56 No. 271	1-14	SCIE, 2024
2.	Akash Kumar Pradhan, **Mrinal Sen**, and Tanmoy Datta	Raman based on-chip photonic quantizers for ADCs	Journal of the Optical Society of America B	40 No. 5	1076-1082	SCIE, Accepted 21 March 2023
3.	Kamanashis Goswami, Haraprasad Mondal, and **Mrinal Sen**	Design of 1-to-2-line all-optical decoder based on MMI phase shifter	Optical and Quantum Electronics	55 No. 793	1-17	SCIE, 2023
4.	H. Mondal, N. Dutta, M. M. Das, S. Bhattacharjee, K. Goswami, S. Dutta, **Mrinal Sen**	Design and simulation of phase shifter based on multimode interference in photonic crystal waveguide	The European Physical Journal D	77 No.188	1-10	SCIE, 2023
5.	Kamanashis Goswami, Haraprasad Mondal, and **Mrinal Sen**	Design and analysis of passive and phase insensitive all-optical isolator in linear optical platform	Optics Communications	529	129071	SCIE, 2023

6.	Shatrughna Kumar and **Mrinal Sen**	Low-power, high-performance, and small-footprint, single-pump optical parametric amplifier for photonic integrated circuits	Journal of Applied Physics	132	123106 (2022) pp. 1-16	SCIE, 07th September 2022
7.	Kamanashis Goswami, Haraprasad Mondal and **Mrinal Sen**	Optimized design of multiple bends for maximum power transfer in optical waveguide	Optik	265	169448	SCI, Accepted 04 June 2022
8	Akash Pradhan, **Mrinal Sen**, and Tanmoy Datta	Raman mediated solitonic pulse compression	Journal of the Optical Society of America B	https://doi.org/10.1364/JOSAB.460267		SCI, Accepted 13 May 2022
9.	Kaushik Shukla, Tanmoy Datta, **Mrinal Sen**	MEMS based bimorph optical temperature sensor	Journal of Applied Physics	131 No. 21	1-8	SCI, Accepted 11 May 2022
10.	Haraprasad Mondal, Kamanashis Goswami, **Mrinal Sen**, and Wasikur Rahaman Khan	Design and analysis of all-optical logic NOR gate based on linear optics	Optical and Quantum Electronics	54, No. 272	1-14	SCI, Accepted on 22 February 2022
11.	Kamanashis Goswami, Haraprasad Mondal, **Mrinal Sen**, and Anup Sharma	Design and Analysis of All-Optical Isolator Based on Linear Photonic Crystal	Brazilian Journal of Physics	52, No. 78	1-10	SCI, Accepted on 09 March 2022
12.	Anup Sharma, Kamanashis Goswami, Haraprasad Mondal, Tanmoy Datta, and **Mrinal Sen**	A review on photonic crystal based all-optical logic decoder: linear and nonlinear perspectives	Optical and Quantum Electronics	54, No. 90	1-24	SCI, Accepted on 18 December 2021
13.	Akash Kumar Pradhan, **Mrinal Sen** and Tanmoy Datta	LED pumped Raman laser: Towards the design of an on-chip all-silicon laser	Optics & Laser Technology	147	107634	SCI, Accepted on 1 November 2021
14.	Chandra Prakash and **Mrinal Sen**	A Compact TE-Notch Filter With Simultaneous Capability of TM-Suppression and Sensing Applications	IEEE Transactions on Nanotechnology	20	644-652	SCI, Accepted on 18 August 2021
15.	Chandra Prakash and **Mrinal Sen**	Significance of Bloch impedance over wave impedance in photonic crystal waveguides	Journal of the Optical Society of America B	38 No. 6	1997--2003	SCI, Accepted on 04 May 2021
16.	Yash Raj, Kaushik Shukla, Tanmoy Datta, and **Mrinal Sen**	Micro Cantilever-Based Optical Gravimeter	IEEE Sensors Journal	21 No. 13	14759-14766	SCI, Accepted on 18 Mar 2021
17.	Shatrughna Kumar and **Mrinal Sen**	Integrable all-optical switch for photonic integrated circuits	Journal of the Optical Society of America B	38 Issue:2	pp. 611-620	SCI, Accepted on 05 January 2021
18.	Partha Saha and **Mrinal Sen**	NOEMS Based Slotted Photonic Crystal Cavity for the Sensing of Force	IEEE Transactions on Nanotechnology	20	pp. 20-27	SCI, Accepted on 30 November 2020
19.	Kamanashis Goswami, Haraprasad Mondal, and **Mrinal Sen**	A review on all-optical logic adder: Heading towards next-generation processor	Optics Communications	483	p. 126668	SCI, Accepted on 30 November 2020

20.	Partha Saha and **Mrinal Sen**	Ultra-high Q-factor and ultra-sensitive refractive index sensor based on a multiple-slot photonic crystal cavity	IEEE Transactions on Instrumentation and Measurement	70 no. 9504509	pp.1-9	SCI, Accepted on 20 October 2020
21	Tanmoy Datta and **Mrinal Sen**	Raman mediated ultrafast all-optical NOR gate	Applied Optics	vol. 59	6352 (1-8)	SCI, Accepted: 21 June 2020
22	M. Arif Sanjid, K.P. Chaudhary, Sanjay Yadav, **Mrinal Sen**, and S. K. Ghoshal	An accurate inner diameter measurement	Review of Scientific Instruments	vol. 91	065112 (1-8)	SCI, Accepted 29 May 2020
23	Tanmoy Datta and **Mrinal Sen**	All-optical logic inverter for large-scale integration in silicon photonic circuits	IET Optoelectronics	vol. 14, no. 5	pp. 285 – 291	SCI, Accepted on 28th April 2020
24.	Shatrughna Kumar and **Mrinal Sen**	An Integrable All-Optical NOT Gate using Nonlinear Photonic Crystal MZI for Photonic Integrated Circuit	J. Opt. Soc. Am. B	vol. 37	pp. 359-369	SCI, Accepted 9 December 2019
25.	Chandra Prakash, and **Mrinal Sen**	Optimization of Silicon-Photonic Crystal (PhC) waveguide for a compact and high extinction ratio TM-pass polarization filter	Journal of Applied Physics	vol. 127	023101 (1-9)	SCI, Accepted: 22 December 2019
26.	M. Arif Sanjid, Sanjay Yadav, **Mrinal Sen**, and S. K. Ghoshal,	A Review of Diameter Measurement and a Proposal for the Improvement Thereof	MAPAN	35	pp. 275–286	SCI, Accepted: 17 November 2019
27.	Akash Kumar Pradhan and **Mrinal Sen**	An integrable all-silicon slotted photonic crystal Raman laser	Journal of Applied Physics	vol. 126	p. 233103 (1-11)	SCI, Accepted: 2 December 2019
28.	Haraprasad Mondal, **Mrinal Sen**, and K. Goswami	Design and analysis of a 0.9 Tb/s six-channel WDM filter based on photonic crystal waveguides	J. Opt. Soc. Am. B	vol. 36	pp. 3181-3188	SCI, accepted 30 September 2019
29.	Mahammed Arif Sanjid, Sanjoy K Ghoshal, and **Mrinal Sen**	Reviving the inter-laboratory comparison measurement results	Transactions of the Institute of Measurement and Control	vol. 42	pp: 823-831	SCI, first published online: October 16, 2019
30.	Haraprasad Mondal, **Mrinal Sen**, and K. Goswami	Design and analysis of all-optical 1-to-2 line decoder based on linear photonic crystal	IET Optoelectronics	vol. 13, Issue-4	pp. 191-195	SCI, Accepted on 7th February 2019
31	Tanmoy Datta and **Mrinal Sen**	Integrable all-optical pass switch	Electronics Letters	vol. 54, Issue-25	pp. 1446-1448	SCI, Published 01/11/2018
32.	Chandra Prakash, **Mrinal Sen**, Haraprasad Mondal, and K. Goswami	Design and optimization of a TE-pass polarization filter based on a slotted photonic crystal waveguide	J. Opt. Soc. Am. B	vol. 35	pp. 1791-1798	SCI, Accepted 13 June 2018
33.	Tanmoy Datta, **Mrinal Sen**, Shatrughna Kumar, and Akash Kumar Pradhan	Efficient pump-signal combiner for stimulated Raman scattering in photonic crystal waveguide	Optical Engineering	vol. 57	pp. 075103 (1-7)	SCI, Accepted: 26 June, 2018
34.	M. Arif Sanjid, K. P. Chaudhary, Sanjay Yadav, **Mrinal Sen**, and Sanjoy K Ghoshal	A novel method of diameter measurement of pistons used in pressure standards using scanning principle and fusion technique	Measurement Science and Technology	vol. 29	085008 (1-7)	SCI, Accepted: 8 June 2018

35.	Haraprasad Mondal, **Mrinal Sen**, Chandra Prakash, K. Goswami and C. K. Sarma,	Impedance matching theory to design an all-optical AND gate	IET Optoelectronics	Vol. 12	pp. 244-248	SCI Accepted: 28th April 2018
36.	Partha Saha and **Mrinal Sen**	A slotted photonic crystal nanobeam cavity for simultaneous attainment of ultra-high Q-factor and sensitivity	IEEE Sensors Journal	Vol. 18, No.-9	pp. 3602-3609	SCI, Accepted: March 3, 2018
37.	Shatrughna Kumar and **Mrinal Sen**	High-gain, low-threshold and small-footprint optical parametric amplifier for photonic integrated circuits	Journal of the Optical Society of America B	Vol. 35, No. 2	pp. 362-371	SCI, Accepted: 13 December 2017
38.	Tanmoy Dutta and **Mrinal Sen**	LED pumped micron-scale all-silicon Raman amplifier	Superlattices and Microstructures,	Vol. 110	pp. 273-280	SCI, Accepted 23 August 2017
39.	Tanmoy Dutta and **Mrinal Sen**	Characterization of slotted photonic crystal waveguide and its application in nonlinear optics	Superlattices and Microstructures	Vol. 109	pp. 107-116	SCI, Accepted 23 April 2017
40.	Bindu Priyadarshini, Mukul Kumar Das, **Mrinal Sen** and Subindu Kumar	Radial microwire array solar cell with pyramidal structure	Superlattices and Microstructures	Vol. 98	pp. 208-219	SCI, Accepted 17 August 2016
41.	**Mrinal Sen** and Mukul K. Das	High-speed all-optical logic inverter based on stimulated Raman scattering in silicon nanocrystal	Applied Optics	Applied Optics	pp. 9136-9142	SCI, Accepted: 28 September 2015
42.	**Mrinal Sen** and Mukul K. Das	Raman mediated all-optical cascadable inverter using silicon-on-insulator waveguides	Optics Letters	Vol. 38	pp. 5192–5195	SCI, Accepted: 1 November, 2013
43.	**Mrinal Sen** and Mukul K. Das	Determination of resonance frequencies in silica fiber using SRS gain	Optical and Quantum Electronics	Vol. 45	pp 735-745	SCI, Accepted: 23 March 2013

Details of publications in international conferences/seminars:

Sl. No.	Details
1.	Shivesh Kumar, and Mrinal Sen, "Design and Analysis of an Optical Gas Sensor based on Refractive Index of different gases including Methane and Carbon Monoxide," in international conference on Safe, Smart and Sustainable Mining (3SM), 16-18 December, 2023, Goa, India.
2.	Akash Kumar Pradhan, Anis Kumar Kabiraj, and **Mrinal Sen**, "A photonic crystal ring resonator with circular air slot to achieve high quality factor," in International Symposium on Optomechatronic Technologies (ISOT), 11-13 November **2019** Goa, India.
3.	Shatrughna Kumar, Kamanashis Goswami, Akash Kumar Pradhan, and **Mrinal Sen,** "An Integrateable Wavelength Division Demultiplexer for Photonic Integrated Circuits," in International Symposium on Optomechatronic Technologies (ISOT), 11-13 November **2019** Goa, India.
4.	Chandra Prakash, Partha Saha, and **Mrinal Sen,** "W1 photonic crystal slab waveguide as an ultra-compact TE-pass polarization filter," Proc. SPIE 10927, Photonic and Phononic Properties of Engineered Nanostructures IX, 109272A, 4 March **2019**; https://doi.org/10.1117/12.2512165
5.	Haraprasad Mondal, Kamanashis Goswami, and **Mrinal Sen**, "Optimized Design of 60 Degree Bend in Optical Waveguide for Efficient Power Transfer," 3RD INTERNATIONAL CONFERENCE ON Communication, Devices and Networking (ICCDN-2019), 9-10th December, **2019**, Sikkim Manipal Institute of Technology, Sikkim.
6.	Akash Kumar Pradhan, Shatrughna Kumar, and **Mrinal Sen**, "Width modulated cascaded photonic crystal nanocavity for Wavelength Division Multiplexing," JSAP-OSA Joint Symposia 2018, Nagoya Japan, 18–21 September **2018**, ISBN: 978-4-86348-694-2.
7.	Tanmoy Dutta, Akash Kumar Pradhan, Shatrughna Kumar and **Mrinal Sen**, "Unified Coupled Equations for Raman Mediated Interaction in Slow-light Regime," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 21, Dhanbad, Jharkhand, India, February

	9-11, **2018**.
8	Shatrughna Kumar, Tanmoy Dutta, Akash Kumar Pradhan and **Mrinal Sen**, "Observation of pulse-Phase Shift in a Highly-nonlinear Slotted Photonic Crystal Waveguide," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 32, Dhanbad, Jharkhand, India, February 9-11, **2018**.
9.	Partha Saha, Rashmi kumara, Akash Kumar Pradhan and **Mrinal Sen**, "A slotted photonic crystal ring resonator for refractive index sensing," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 76, Dhanbad, Jharkhand, India, February 9-11, **2018**.
10.	Sweta Rani, Akash Kumar Pradhan, Shatrughna Kumar and **Mrinal Sen**, "Supercontinuum generation through nanowire As_2S_3 chalcogenide core photonic crystal fiber," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 76, Dhanbad, Jharkhand, India, February 9-11, **2018.**
11.	Haraprasad Mondal, Kamanashis Goswami, Chandra Prakash and **Mrinal Sen**, "An all-optical ultra-compact 4-channel wavelength de-multiplexer," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 62, Dhanbad, Jharkhand, India, February 9-11, **2018**.
12.	Akash Kumar Pradhan, Tanmoy Dutta, Partha Saha and **Mrinal Sen**, "Width Modulated Tapered Air-Slot based Photonic Crystal Nanocavity," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 46, Dhanbad, Jharkhand, India, February 9-11, **2018**.
13.	Chandra Prakash, Haraprasad Mondal, Kamanashis Goswami and **Mrinal Sen**, "Investigation for the efficient interface of strip and PhC Slot waveguide," in Proceedings of 3rd International Conference on Microwave and Photonics, p. 34, Dhanbad, Jharkhand, India, February 9-11, **2018**.
14.	Abhishek Jha and **Mrinal Sen**, "Use of FES with Vibrotactile feedback for Motor Learning," IEEE International conference on Internet of Things and Applications (IOTA 2016), Maharashtra Institute of Technology, Pune, India, 22th-24th January **2016**.
15.	Haraprasad Mondal, Saurav Chanda, **Mrinal Sen** and Tanmoy Datta, "All Optical AND Gate based on Silicon Photonic Crystal," 2nd International Conference on Microwave and Photonics, ISM, Dhanbad, Jharkhand, India, 11-13 December, **2015**.
16.	Rajib Ratan Ghosh, Tanmoy Datta, Haraprasad Mondal, and **Mrinal Sen**, "Efficient TE-pass polarizer based on Photonic Crystal Slot Waveguide," Accepted in 1st International Conference in Opto-Electronics and Photonics Materials (ICOPMA-2015), Centre for Nonlinear Science and Engineering (CeNSE), School of Electrical and Electronics Engineering, SASTRA University, Thanjavur, Tamilnadu, India, 27-28 February, **2015**.
17.	Abhishek Jha, Keshav Gupta and **Mrinal Sen**, "M2M Communication System for Networked Robots with Low Memory Footprint," International Conference on Information Technology Systems and Innovation (ICITSI) 2014, Bandung-Bali, 24-27 November, **2014**, ISBN: 978-1-4799-6526-7.
18.	Somenath Dutta, Tanmoy Datta, **Mrinal Sen** and Arpan Deyasi, "Design of Efficient Photonic Coupler Structure for Lumped Raman Amplification in Silicon Waveguides," International Conference on Devices, Circuits and Communications (ICDCCOM-2014), BIT Meshra, India, 12-13 September, **2014**.
19.	Abhishek Jha and **Mrinal Sen**, "SEMG Based Study On The Difference In The Muscle Strength Of A Half Paralytic Person Due To Stroke," 2014 International Conference on Innovations in Engineering and Technology (ICIET'14), K.L.N. College of Engineering, Madurai, Tamilnadu, India, 21-22 March, **2014**.
20.	Manan Temani, Rohank Agarwal, Rhythm Kohli, and **Mrinal Sen**, "Smart Approach to Traffic Management Using LabVIEW," Proceeding of Fifth International Conference on Intelligent Systems, Modelling and Simulation, p 62, ISBN 978-1-4799-3857-5, Langkawi, Malaysia, 27-29 January, **2014**.
21	**Mrinal Sen**, Tanmoy Datta and Mukul K. Das, "Effect of geometry and reverse bias on free carrier lifetime in p-i-n structured optical rib waveguide," in Proceeding of International Conference on Microwave and Photonics (ICMAP 2013), Dhanbad, Jharkhand, India. 13-15 December, **2013**.
22	**Mrinal Sen** and Mukul K. Das, "Stimulated Raman Scattering based All-Optical Logic Inverter using Tellurite Fiber," (accepted for publication) in Proceeding of International Conference on Microwave and Photonics (ICMAP 2013), Dhanbad, Jharkhand, India. 13-15 December, **2013**.

23	**Mrinal Sen** and Mukul. K. Das, 2012, "Determination of resonance frequencies in silica fiber using SRS gain," in Proceeding of the 12th International Conference on Numerical Simulation of Optoelectronics Devices (NUSOD-12), pp. 137–138. Shanghai, China, **2012**.
24.	Rajeev Arya, B. V. Sai Kiran, Y. S. P. Kumar, J. C. P. Reddy, Ravi T. Nandula, **Mrinal Sen** and R. Janarthanan, "Autonomous navigation of vehicle using visual feedback," in proceeding of International Conference on Computing, Communication and Information Technology (ICCCIT-2012), pp. 185-189, Thiruninravur, Chennai, India, **2012.**
25.	**Mrinal Sen**, Sheli Sinha Chaudhury, Amit Konar, R. Janarthanan, "An Evolutionary Gene Expression Microarray Clustering Algorithm Based on Optimized Experimental Conditions," in World Congress on Nature & Biologically Inspired Computing (NaBIC 2009), pp. 760-765, DOI: 10.1109/NABIC.2009.5393872, **2009**.

National Conferences:

1.	Rajeev Arya, Mrinal Sen, K. Goswami and H. P. Mondal, "Design of mobile robot and it's optimum path planning," in Proceeding of National Conference on Emerging Trends in Computer Technology (NCETCT-2012), Shirpur, Maharastra, India, 21 April, 2012.
2.	Mrinal Sen and Mukul K. Das, "Theoretical Modeling of Resonance Frequency for Susceptibility of Optical Fiber Using Raman Gain Spectrum," in Proceeding of Frontiers in Electronics Communication and Instrumentation Technology" (FECIT 2011), ISM Dhanbad, India, Nov 3-4, 2011.

Details of book chapters published:

Sl. No.	Title of the Chapter	Title of books	Year of publication	Name of publisher
1.	Slotted Photonic Crystal Waveguide: An Effective Platform for Efficient Nonlinear Photonic Applications	Photonics, Plasmonics and Information Optics: Research and Technological Advances	2021	CRC Press

Reviewers of the following international journals

- IEEE Access
- Nature Scientific Reports
- Journal of Optical Society of America B
- Optics Letters
- IEEE Sensors Journal, IEEE
- Optics Express, Optical Society of America
- Applied Optics, Optical Society of America
- Results in Physics
- Arabian Journal for Science and Engineering, Springer

Details of organisation of national/international seminars:

Sl No.	Organised/Participated	Duration	Topic	Details
1.	Member of the organizing committee	February 9-11, 2018	Microwave and Photonics	3rd International Conference on Microwave and Photonics
2.	Technical co-chair	11-13 Dec., 2015	Microwave and Photonics	2nd International Conference on Microwave and Photonics
3.	Member of the organizing committee	13-15 Dec., 2013	Microwave and Photonics	International Conference on Microwave and Photonics (2013)

Details of participation in Institute level activities:

Sl. No.	Name of the Positions hold	Duration		Years of Experience
		From	To	
1.	Vice Chairperson (UG - Placements)	18.10.2021	Continuing	Less than 1 year
2.	Chief Warden	01.07.2020	30.06.2021	1 year
3.	Warden	01.10.2018	30.06.2020	Approximately 2 years
4.	Faculty In-charge of E-beam Lithography Laboratory in CRF	22.07.2019	Continuing	Over 1 Year
5.	Co-coordinator, Concetto 2018	09.08.2018	15.12.2018	4 Months approx
6.	Counsellor, Science and Technology Council, Gymkhana	27.08.2019	13.06.2021	Approximately 2 Years
7.	Institute Representative JEE Advance	26.09.2020	27.09.2020	Not Applicable
8.	Member of the Institution's Innovation Council (IIC) 3.0	20.10.2020	Continuing	2 months approx.

Details of participation in Departmental level activities:

Sl. No.	Name of the Positions hold	Duration		Years of Experience
		From	To	
1.	Faculty In-Charge JRF	15.04.2015	25.11.2017	Approximately 3 years
2.	Faculty In-charge Microprocessor and Embedded System Laboratory	19.05.2015	Continuing	More than 5 Years
3.	Faculty In-charge Digital Electronics Laboratory	19.05.2015	Continuing	More than 5 Years
4.	Coordinator for Summer Training in ECE	19.05.2015	Continuing	More than 5 Years
5.	Coordinator of Society of Electronics Engineers (SEE)	21.08.2019	Continuing	Over 1 Year
6.	IT Coordinator	03.08.2020	Continuing	3 Months Approx.
7.	Convenor of the Revenue and Budgetary Committee	05.10.2020	Continuing	Less than a month

Details of participation in events organized by other institutes:

Sl. No.	Name of the activity	Place	Date(s)
1.	Guest Speaker in the one-week faculty development program on "Recent trends on Microwave and Photonics"	School of Electronics Engineering, Vellore Institute of Technology, Vellore	22nd January 2021
2.	Delivered an expert talk as a Guest Speaker in the conference "National Conference on Recent Advancements and Emerging Challenges in Science and Technology for Sustainable Development (RESTS-2020)"	Dibrugarh University Institute of Engineering and Technology, Assam	14 July 2020
3.	Acted as the External Examiner for the viva-voce of Microprocessor Lab examination of B.Tech 5th Semester	Department of Electronics and Communication Engineering, BIT Sindri	22nd December 2018
4.	Presented a Technical talk on Embedded & IOT system	Ramgarh Engg. College Jharkhand	6th December 2018

Details of contribution towards Lab Development:-

- Developed the Embedded System Lab for the Department
- Developed the E-beam Lithography and *Nanopattern Generating System Lab* for the CRF

Details of contribution towards Students Welfare:-

- Member of the Basant Cultural Committee
- Mentored a team of students to design robots for participating in ABU ROBOCON 2018 competition
- Faculty Co-coordinator CONCETTO -18
- Provided with recommendations to several students for their higher studies

Any other significant achievement:

- Chief Warden
- Acted as a Micro Observer in the Assembly Election 2019
- Procured several high valued equipment for the CRF and the Department

Details of extra-curricular activities:

- Member of the organizing committee for Hostel Day in Amber
- Member of the badminton team of ISM
- Winner of Carom Tournament organized by the Scolomin Club