

Name: Dr. Sourav Moitra

Department: Electronics and Communication Engineering

Contact Nos.: 9564669036

Qualifications: PhD, Engineering

Designation: Assistant Professor (Sr. Grade)

VIDWAN ID: 187575

Experience (Teaching / Research / Industry, in years): 14 Years

Date of Joining at the Present Institution: 30.01.2010

Qualifications Summary (Reverse chronological order):

Degree	Institute	From – To	Subjects
B.TECH	MCET BERHAMPORE	2001-2005	ECE
M. TECH	BURDWAN UNIVERSITY	2007-2009	MICROWAVE ENGINEERING
PHD	NIT DURGAPUR	2015-2020	MICROWAVE ENGINEERING

Experience Summary (In chronological order):

Designation	Organization	Date From	Date To
Assistant Professor	Dr. B C Roy Engineering College, Durgapur-713206, West Bengal, India	01.07.2010	Till Date
Lecturer	Dr. B C Roy Engineering College, Durgapur-713206, West Bengal, India	30.01.2010	30.06.2010
Graduate Engineer	Elcon Engineering	01.07.2005	30.07.2007

Specialization/Research Interest: Electromagnetics, Microwave Engineering, Communication Engineering, Satellite Communication, Analog Electronics



Awards & Recognitions

Student Project awarded National Young Inspirational Scientist Award, 2011

Courses taught: Electromagnetics, Microwave Engineering, Communication Engineering, Analog Electronics

B.Tech: Electromagnetics, Microwave Engineering, Communication Engineering, Analog Electronics

M.Tech: Microwave Engineering, Photonics and Optical Fiber Communication

Online Mode of Teaching:

The Faculty member needs to specify the online teaching/ assessment method adopted. (Link to any faculty created resources for Lecture notes / PPT/ Video Lecture etc. in Google Drive / Weblink etc): Online Video Lectures via Google Meet and Personal Youtube Channel (<https://www.youtube.com/channel/UCOrKLe5i3Ybkt6XUqi4dNiw>)

Publications:

Journal:

1. **S. Moitra** and P. S. Bhowmik, "Modelling and Analysis of Substrate Integrated Waveguide (SIW) & Half-mode SIW (HMSIW) Band-Pass Filter using Reactive Longitudinal Periodic Structures", *AEU-International Journal of Electronics and Communications, Elsevier*, vol. 70, no. 10, pp. 1593-1600, December 2016. (IF: 2.924)
2. **S. Moitra** and P. S. Bhowmik, "Design and Analysis of 150° Bend SIW and Corrugated SIW Bandpass Filter with Multiple Transmission Zeroes using reactive periodic structures suitable for Microwave Integrated Circuits (MICs)", *Wireless Personal Communication, Springer*, vol. 101, no. 1, pp. 167-180, July 2018. (IF: 1.17)
3. **S. Moitra** and C. K. Ghosh, "Study of Decoupling between patch elements of Microstrip Array Using Electromagnetic Soft Surface", *Journal of Electromagnetic Waves and Applications, Taylor & Francis*, vol. 32, no. 9, pp. 1126-1135, January 2018. (IF:1.373)
4. **S. Moitra**, R. Dey and C. K. Ghosh, "Angular bend Half Mode Substrate Integrated Waveguide (HMSIW) based Band-Pass Filter with multiple transmission zeroes", *Wireless Personal Communication, Springer*, vol. 104, pp. 259-267, January 2019. (IF: 1.17)
5. **S. Moitra** and P. S. Bhowmik, "Effect of Various Slot Parameters in Single Layer Substrate Integrated Waveguide (SIW) Slot Array Antenna for Ku-Band Applications", *The Applied Computational Electromagnetics Society Journal, ACES*, vol. 30, No. 8, pp. 934-939, August 2015. (IF: 0.6)
6. **S. Moitra**, R. Dey and P. S. Bhowmik, "Design and Band Coalition of Dual Band Microstrip Filter using DGS, Coupled Line Structures and Series Inductive Metallic Vias", *Analog Integrated Circuits and Signal Processing, Springer*, vol. 101, pp. 77-88, January 2019. (IF:0.925)
7. **S. Moitra** and P. S. Bhowmik, "Performance Study of 90° Bend Substrate Integrated Waveguide Band-Pass Filter with Multi-Transmission Zeroes for MIC applications", *Wireless Personal Communication, Springer*, vol. 105, pp. 387-398, March 2019. (IF: 1.17)

8. **S. Moitra** and P. S. Bhowmik, "Analyses of combined DSRR and EBG structures over SIW and HMSIW for obtaining band pass response", *Wireless Personal Communication, Springer*, vol. 111, pp. 1207-1218, 2020. (IF: 1.17)
9. **S. Moitra** and R. Dey, "Design of dual band and tri-band Bandpass Filter (BPF) with Improved Inter-Band Isolation Using DGS integrated Coupled microstrip lines Structures", *Wireless Personal Communication, Springer*, vol. 110, pp. 2019-2030, Oct. 2019. (IF: 1.17)
10. **S. Moitra**, R. Dey and H. Kumar, "Planar and angular modified substrate integrated waveguide (SIW) filter with electromagnetic band-gap (EBG) structures", *Global Journal of Researches in Engineering: F, Electrical and Electronics Engineering*, Volume 17, No. 7, December 2017, pp. 32-40.
11. **S. Moitra**, B. Mondal, P. Tapu and A. K. Bhattacharjee, "A Defected Half Mode Substrate Integrated Waveguide (D-HMSIW) Band-pass Filter with T-extension for Ku-Band Applications", *Journal of Telecom.*, Volume 23, Issue 1, December 2013, Pg. 06-10.
12. **S. Moitra**, A. K. Mukhopadhyay and A. K. Bhattacharjee, "Effect of Inductive Posts on Y-junction Substrate Integrated Waveguide (SIW) Slot Antenna Array", *Journal of Telecomm.*, Volume 22, Issue 1, October 2013, Pg. 25-29.
13. **S. Moitra**, A. K. Bhattacharjee and A. K. Mukhopadhyay, "Ku-band Substrate Integrated Waveguide (SIW) Slot Array Antenna for Next Generation Networks ", *Global Journal of Computer Science and Technology: E*, Volume 13, Issue 10, Version, 10, Pg. 11-15, 2013.
14. **S. Moitra**, S. Roy, C. K. Ghosh and S. K. Parui, "Printed UWB Antenna with Band Rejection characteristic at IEEE 802.11a bands", *International Journal of Engineering and Innovative Technology (ISSN: 2277-3754) Volume 2, Issue 3, September 2012, Pg. 20-14.*
15. C. K. Ghosh, A. Bhowmik, **S. Moitra** and S. Das, "Experimental Performance Studies of Switched Diversity MIMO Antenna in a Fading Scenario", *International Journal of Multidisciplinary Research and Advances in Engineering (IJMRAE)*, Vol. 2, No. 1, April 2010.

Conference:

1. **S. Moitra**, J. Mishra and I. Aarya "Wideband HMSIW Band Pass Filter design using H-shaped Periodic Structures", *IEEE IEMENTech 2019*, August 28-30, Kolkata, India, 2019.
2. R. Kumar, P. Sanyal and **S. Moitra**, "Effect of circular complementary split ring resonator in HMSIW band-pass filter design", *Tenth Int. Conf. on Computing, Comm. and Networking Tech.*, IIT Kanpur, July 06-09, Kanpur, India, 2019.
3. **S. Moitra**, K. Hazra, V. K. Singh, U. Mukherjee, S. Banerjee and S. Maji "Effect of I Shaped Periodic Structures over Collinear Arms of 150 Degree Bend Substrate Integrated Waveguide", *IEEE IEMENTech 2019*, August 28-30, Kolkata India, 2019. (**IEEE Conference Proceedings**)
4. **S. Moitra**, S. Nayak, R. Regar, S. Kumari, K. Kumari and F. Naseem, "Circular Complementary Split Ring Resonators(CSRR) Based SIW BPF", *In Proc. of IEEE ICACCP 2019*, February 25-28, 2019, SMIT, Gangtok, India. (**IEEE Conference Proceedings**)
5. P.Sanyal, M. Singha Roy, P. P. Paul and **S. Moitra**, "Novel Microstrip Patch Antenna for WLAN and WiMAX Applications", *In Proc. of IEEE ICRIEEECE 2018*, July 27-28, 2018, KIIT, Bhubaneswar India. (**IEEE Conference Proceedings**)
6. **S. Moitra**, K. Hazra, M. Singh, N. Kumari, M. Manjoor, A. K. Pandey, Rahul and S. Kumar, "Design of Substrate Integrated Waveguide (SIW) BPF using Circular Ring, Split Ring and Inductive Posts", *In Proc. of IEEE IEMENTech 2018*, May 04-05, 2018, Kolkata India. (**IEEE Conference Proceedings**)
7. **S. Moitra**, C. K. Ghosh, A. K. Prasad, S. Kumari, D. Bashishtha, S. Srivastava and A. Chatterjee, "Performance of I-shaped EBG structures over Low Loss Angular Bend Substrate Integrated

- Waveguide (SIW)", *In Proc. of IEEE IEMENTech 2018*, May 04-05, 2018, Kolkata India. **(IEEE Conference Proceedings)**
8. **S. Moitra**, P. S. Bhowmik and A. Muvvala, "Design and Characterization of Angular Bend Substrate Integrated Waveguide (SIW) Band Pass Filter for Microwave Ku-Band Applications", *In Proc. of International Conference on Communication, Computing and Internet of Things, IC3IOT 2018*, pp. 224-228, Feb. 15-17, 2018, Chennai, India. **(IEEE Conference Proceedings)**
 9. **S. Moitra**, P. S. Bhowmik and A. Muvvala, "150° Bend Half Mode Substrate Integrated Waveguide (HMSIW) Band Pass Filter using T-shaped Periodic Elements", *In Proc. of International Conference on Communication, Computing and Internet of Things, IC3IOT 2018*, pp. 229-232, Feb. 15-17, 2018, Chennai, India. **(IEEE Conference Proceedings)**
 10. S. Srivastava, A. Chatterjee, S. Kumari, A. K. Prasad, D. Bashistha, C. K. Ghosh and **S. Moitra**, "Bandpass Filter (BPF) Design using Waveguide Iris Conformation over Substrate Integrated Waveguide (SIW) Bend", *In Proc. of IEEE IEMENTech 2017*, April 28-29, 2017, Kolkata India. **(IEEE Conference Proceedings)**
 11. N. Laya, A. Poddar, A. Mandal, K. Shivam, J. Kota, R. Dey and **S. Moitra**, "Design of Half Mode Substrate Integrated Waveguide (HMSIW) Filter with Series Defective Microstrip Structure (DMS) for Ku band Operation", *In Proc. of IEEE IEMENTech 2017*, April 28-29, 2017, Kolkata India. **(IEEE Conference Proceedings)**
 12. M. Singha Roy and **S. Moitra**, "Complementary Inverted Reactive Slot Antenna Embedded in Single Layer Substrate Integrated Waveguide (SIW)", *In Proc. of IEEE IEMENTech 2017*, April 28-29, 2017, Kolkata India. **(IEEE Conference Proceedings)**
 13. **S. Moitra**, S. R. Rout, A. Nath and P. S. Bhowmik, "Band Pass Filter Design using Half Mode Substrate Integrated Waveguide (HMSIW) with Periodically Loaded F-EBG Structures", *In Proc. of IEEE Techsym, Sept. 30-Oct. 02 2016, IIT Kharagpur, India*. **(IEEE Conference Proceedings)**
 14. R. Dey, H. Kumar and **S. Moitra**, "Electromagnetic Bandgap (EBG) Loaded Substrate Integrated Waveguide (SIW) Filter", *In Proc. of 5th International Conference on Computing, Communication and Sensor Networks (CCSN 2016)*, Dec. 24-25, 2016, Kolkata, India.
 15. **S. Moitra**, K. Hajra, S. Mukhopadhyay, D. Kumar, R. Dey, H. Kumar and R. Kumar, "Effect of Reflection Cancelling Vias on Substrate Integrated Waveguide (SIW) Slotted Antennas", *In Proc. of 4th International Conference on Computing, Communication and Sensor Networks (CCSN 2015)*, 24-25 Dec., 2015, Kolkata, India.
 16. **S. Moitra**, B. Mondal, A. K. Mukhopadhyay and P. S. Bhowmik, "Wide-banding of Half Mode Substrate Integrated Waveguide (HMSIW) Filters using L-slots", *In Proc. of International Conference on Computational Advancement in Communication Circuits and Systems*, Kolkata, Oct. 30-Nov 01, 2014. **(Springer Book Chapter)**
 17. **S. Moitra**, B. Mondal, M. Md. Shahid, K. Sain, D.Kumar & S. Ghosh, "Single Layer High Gain Y-junction Substrate Integrated Waveguide (SIW) Slot Antenna Array", *In Proc. of 1st International Conference on Microelectronics, Circuits & Systems*, July 11-12, 2014, Kolkata, India.
 18. **S. Moitra**, B. Mondal, J. Kundu, A. K. Mukhopadhyay and A. K. Bhattacharjee, "Substrate Integrated Waveguide (SIW) Filter Using Stepped-Inductive Posts for Ku-Band Applications", *In Proc. of International Conference on Information Technology in Signal and Image Processing*, Oct 18-19, 2013 in Mumbai, India, Pg. 335-338. **(IEEE & IET Conference Proceedings)**.
 19. **S. Moitra**, B. Mondal, and A. K. Bhattacharjee, "Design & Analysis of a Compact K-band Substrate Integrated Waveguide (SIW) Slot Antenna Array for Satellite & Radar Applications", *In Proc. of International Conference on Systemics, Cybernetics and Informatics (ICSCI)*, Hyderabad, India, Feb 3-6, 2014, Pg. 63-66.

20. **S. Moitra**, C. K. Ghosh, A. Roy, B. Rana and & S. Parui, "DGS Integrated Wideband E-shaped Microstrip Antenna Array for Wireless applications", *In Proc. of IEEE India Antenna Week, May 27-31, 2012 Gangtok, Sikkim, India. (IEEE Conference Proceedings)*
21. **S. Moitra**, S. Roy, C. K. Ghosh and S. K. Parui, "Novel DMS based UWB Antenna with band rejection characteristics", *In Proc. of International Conference on Communication and Industrial Application (ICCIA) Dec. 2011, Kolkata, India. (IEEE Conference Proceedings)*
22. **S. Moitra**, S. Parui, and A. Roy, "A Circular patch Microstrip Antenna with band-notched Characteristics for IEEE 802.11a frequencies", *In Proc. of International Symposium on Devices Mems Intelligent Systems and Communication, 2011, Pg. 279-282 (ISSN 0975 8887)*
23. C. K. Ghosh, **S. Moitra**, J. Kundu, A. K Mukhopadhyay and S. K. Parui, "Design of a Dual Polarized Rectangular Patch Antenna using DGS", *In Proc. of IEEE Applied Electromagnetics Conference (AEMC) & Indian Antenna Week (IAW) 2011. (IEEE Conference Proceedings)*

Book Chapter:

1. **S. Moitra**, B. Mondal, A. K. Mukhopadhyay and P. S. Bhowmik, "Wide-banding of Half Mode Substrate Integrated Waveguide (HMSIW) Filters using L-slots", *In Proc. of International Conference on Computational Advancement in Communication Circuits and Systems, Kolkata, Oct. 30-Nov 01, 2014. (Springer Book Chapter)*

Supervision of Ph.D/M.Tech / B.Tech Projects:

For Ph.D

1. Jhuma Kundu Paul, Dr. P S Bhowmik and Dr. S Moitra, " Study on Body Wearable Substrate Integrated Waveguide Filters and Antennas", 2021, NIT DURGAPUR (Enrolled)

Projects:

For B. Tech

Sl. No.	Project Title	Department & Semester	Year	Brief Description
1	Wideband SIW BPF Design	B-Tech (ECE), Final Year Project Work	2019	Completed
2	Design of CSRR based band-pass filters	B-Tech (ECE), Final Year Project Work	2018	Completed
3	Design and development of SIW EBG based Filters	B-Tech (ECE), Final Year Project Work	2017	Completed
4	Design of Iris BPF using SIW Technology	B-Tech (ECE), Final Year Project Work	2016	Completed
5	Studies on Broadband SIW Band Pass Filters	B-Tech (ECE), Final Year Project Work	2015	Completed
6	Studies on X- Band SIW Band Pass Filters	B-Tech (ECE), Final Year Project Work	2015	Completed
7	Investigation is SIW Antennas	B-Tech (ECE), Final Year Project Work	2014	Completed
8	Investigation is Substrate Integrated Waveguide Band-pass Filters	B-Tech (ECE), Final Year Project Work	2014	Completed
9	Design of microwave & millimeter-wave passive components based on Substrate Integrated Waveguide	B-Tech (ECE), Final Year Project Work	2013	Completed
10	Study of Probe Feed Radiators based on	B-Tech (ECE), Final Year	2012	Completed

	Computational Electromagnetics	Project Work		
11	GSM Mobile Phone Antenna system	B-Tech (ECE), Final Year Project Work	2012	Completed
12	Simulations of radiating systems based on FEM	B-Tech (ECE) Final Year Project Work	2011	Completed

For M. Tech

1	Design of SIW BPF using circular CSRR structures	M-Tech (ECE), Final Year Project Work	2019	Completed
2	Design of SIW BPF using periodic EBG structures	M-Tech (ECE), Final Year Project Work	2017	Completed
3	Design & Development of SIW Antennas	M-Tech (ECE), Final Year Project Work	2016	Completed
4	Integrated Dual Band Microstrip Antenna for Bluetooth and UWB Communication	M-Tech (ECE), Final Year Project Work	2012	Completed
5	Dual Band Antenna for FCC Unlicensed Bands and Slot-less Microstrip Antenna for UWB Communication	M-Tech (ECE), Final Year Project Work	2011	Completed
6	A Circular Patch Monopole UWB Antenna	M-Tech (ECE), Final Year Project Work	2011	Completed

Invited Lectures:

Future Applications of Microwave technology, Bengal College of Engineering and Technology, 2012

Participation in seminar/conference/symposium/workshop/discussion meeting

1. Participated in 1 day seminar on Advances in Nano-Satellite Technology on 4th November 2015 at Dr. B C Roy Engineering Coll., Durgapur-713206
2. Participated in 2 day IEEE AP-MTT sponsored Workshop on Microwave Engineering and Application, 14-15th March 2015, Dr. B C Roy Engineering Coll., Durgapur-713206
3. One Day Seminar at the University Institute of Technology, Burdwan University, Golapbag, Burdwan on 20th August 2007 on "I.T. Beyond 2010".
4. Participated in CASCOM'07 organized by IEEE Calcutta Section on November 24, 2007 at Jadavpur University.
5. Participated in DLT 2007 organized by IEEE Calcutta Section on December 18, 2007 at Wipro Technologies, Saltlake.
6. Attended a 1-Day Tutorial on MICROWAVE MULTIPLEXED LIGHTWAVE SYSTEM: A flavour of Microwave Photonics organized by jointly IEEE Calcutta Section & it's ED & AP-MTT chapters on 12th January, 2008 at Academy of Technology, Hooghly, West Bengal.
7. Participated in a One Day Seminar on Recent Trends in Information & Communication Technology on 1st March, 2008 at Burdwan Science Centre, Burdwan.

Participation in administrative committees (selected)

Convenor-Dept. Academic Council, In Charge of various Dept. Laboratories, Member-NBA and NAAC accreditation Committee

Membership of professional bodies: IEEE, IETE, IEI, CSI, MGMI etc.:

Microwave Journal, USA