RESUME

Somak Bhattacharyya

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EDUCATION

Degree	Subject	Institution	University	Year	CPI/%
Doctor of Philosophy (PhD)	Electrical Engineering Specialization: RF, Microwave and Photonics	Indian Institute of Technology, Kanpur	Indian Institute of Technology, Kanpur	2015	8.33 (CPI)
Master of Technology (M. Tech)	Radio Physics & Electronics	Institute of Radio Physics & Electronics	University of Calcutta, Kolkata	2008	82.88 (Stood 1st)
Bachelor of Technology (B. Tech)	Radio Physics & Electronics	Institute of Radio Physics & Electronics	University of Calcutta, Kolkata	2006	75.53 (Stood 10th)
Bachelor of Science (B. Sc)	Physics (Hons.)	Scottish Church College	University of Calcutta, Kolkata	2003	66.0
Higher Secondary Examination (XII)	Science	Ballygunge Government High School	West Bengal Council of Higher Secondary Education	2000	82.6
Madhyamik Examination (X)	General	Ballygunge Government High School	West Bengal Board of Secondary Education	1998	85.38

WORK EXPERIENCE

Name of the Organization	Designation	Date of joining	Date of leaving
Indian Institute of Technology (Banaras Hindu University) Varanasi Uttar Pradesh – 221005, India	Associate Professor	26 September, 2023	Till Date
Indian Institute of Technology (Banaras Hindu University) Varanasi Uttar Pradesh – 221005, India	Assistant Professor	24 June, 2018	25 September, 2023
Indian Institute of Technology (Banaras Hindu University) Varanasi Uttar Pradesh – 221005, India	Assistant Professor (Contract)	27 December, 2016	23 June, 2018

Indian Institute of Information Technology Allahabad Uttar Pradesh – 211012, India	Assistant Professor (On Contract)	4 December, 2015	22 December, 2016
Indian Institute of Technology Kanpur Uttar Pradesh - 208016, India	Senior Project Engineer (Ad-hoc) (Project No. SPO/ DLJ/ EE/ 20130312; Principal Investigator: Dr. Kumar Vaibhav Srivastava)	24 August, 2015	16 November, 2015
Indian Institute of Technology Kanpur Uttar Pradesh - 208016, India	Senior Project Engineer (Ad-hoc) (Project No. SPO/ DLJ/ EE/ 20130312; Principal Investigator: Dr. Kumar Vaibhav Srivastava)	12 February, 2015	23 July, 2015
Academy of Technology Adisaptagram, West Bengal - 712121, India	Lecturer	17 January, 2009	24 December, 2009

SUBJECTS TAUGHT

1. Optical Communication (7th Semester, 2023-24)
2. Solid State Electronic Devices (3rd Semester, 2022-23)
3. Microwave Circuits and Measurements (M. Tech 2nd Semester, 2022-23 & 2020-21)
4. Microwave Communication (7th Semester, 2020-21 & 2021-22)
5. Optoelectronics (6th Semester, 2018-19, 2019-20 and 2021-22)
6. Microwave Engineering (6th Semester, 2022-23; 7th Semester, 2018-19 and 2017-18)
7. Microwave Solid State Devices (M. Tech 1st Semester, 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23)
8. Analog Electronics & Circuits (4th Semester, 2021-22, 2020-21, 2019-20, 2018-19, 2017-18 & 2016-17)
9. Radar Engineering (M. Tech 2nd Semester, 2017-18)
10. Advanced Electromagnetics & Antenna (M. Tech 1st Semester, 2023-24 & 2017-18)
11. Introduction to Electronics & Instrumentation (2nd Semester, 2016-17 & 1st Semester, 2019-20)
12. Antenna and Wave Propagation (5th Semester, 2016-17)
13. Analog Communication (3rd Semester, 2016-17 & 4th Semester, 2009-10)
14. Electronics Measurement & Instrumentation (4th Semester, 2015-16)
15. Principles of Communication (4th Semester, 2015-16)
16. Digital Electronics (3rd Semester, 2009-10)

A. Tutorship (during PhD):

- Served as tutor for the course ESc 201 (***Introduction to Electronics***) in 2012-13 (Semester-II), 2013-14 (Semester-II) and 2014-15 (Semester-I).

B. Teaching Assistantship (during PhD):

- ESc 201 (***Introduction to Electronics***) four times
- EE340 (***Introduction to Electromagnetic Theory***)
- Microwave Metamaterial Laboratory
- Optoelectronics Laboratory

AWARDS, HONORS AND GRANTS

- Elected as **Life Senior Member** of ***Wireless, Antenna and Microwave Symposium (WAMS) Society*** since March 2024.
- Received **International travel grant** under the ***International Travel Support (ITS) Scheme, Science and Engineering Research Board (SERB), India*** (ITS/2023/002593) for presenting invited talks in URSI General Assembly 2023 (URSI-GASS 2023) in Sapporo, Japan.
- Recipient of **Exceptional Performance as Reviewer** of ***IEEE Transactions on Antennas and Propagation, 2023***.
- Recipient of **IEEE Uttar Pradesh Section Outstanding Section Volunteer Award 2022** from ***IEEE UP Section***.
- Included in the **Travelling Lecturer Program** of ***Optica*** since November 2022.
- Recipient of **Exceptional Performance as Reviewer** of ***IEEE Transactions on Antennas and Propagation, 2022***.
- Recipient of **IETE Smt. Manorama Rathore Memorial Award 2022** from ***IETE***.
- Included as the only representative from India in the **Speakers Bureau program** of ***IEEE MTT Society*** since 2022.
- Elected as prestigious **Fellow** of ***Antenna Test and Measurement Society India*** since 2022.
- Recipient of Innovation Award in **Microwave Field-2021** from ***IEEE AP/MTT Joint Chapter Gujrat Section***.
- Recipient of **IEEE Uttar Pradesh Section Young Professional Star for the Month of February 2021** from ***IEEE UP Section***.
- Elevated to prestigious **Fellow** of ***IETE, India*** since 2021.
- Elected as prestigious **Associate Fellow** of ***West Bengal Academy of Science and Technology*** since 2020.
- Elected as prestigious **Life Fellow Member** from ***The Optical Society of India*** since 2020.
- Recipient of prestigious **IEEE Senior Membership** from ***IEEE, USA*** since February, 2020. Senior Membership recognizes a professional accomplishment as less than 10% of IEEE Members have achieved this recognition.
- Recipient of **Lifetime Honorary Membership** by ***International Union of Radio Sciences (URSI)*** effective from September, 2017.
- Recipient of **Young Scientist Award** in ***2016 URSI Asia Pacific Radio Science Conference (URSI AP-RASC 2016)*** organized by International Union of Radio Sciences (URSI) during 21-25 August, 2016 in Seoul, South Korea.
- Finalist of best PhD thesis award in **PhD Symposium** in ***IEEE UPCON 2015*** during 4-6 December, 2015 in IIIT Allahabad, India.
- Recipient of First Position of **Young Scientist Award** in ***Second Regional Conference on Radio Science (RCRS) 2015*** organized by International Union of Radio Sciences (URSI), Indian National Science Academy (INSA) and School of Environmental Studies, Jawaharlal Nehru University during 16-19 November, 2015 in New Delhi, India.
- Received **International travel grant** under the ***DST International Travel Support (ITS) Scheme, Science and Engineering Research Board (SERB), India*** (SB/ITS/0070/2015-16) for presenting a paper in 2015 European Conference on Antennas and Propagation (EuCAP), 2015 in Lisbon, Portugal.
- Recipient of **Young Scientist Award** in ***International Symposium on Electromagnetic Theory (EMTS) 2013*** organized by Commission B of International Union of Radio Sciences (URSI) during 20-24 May, 2013.
- **Appreciation Letter** for selection as ***Young Scientist Award in the 6th meeting of the Senate, IIT Kanpur*** in 2012-13.
- Recipient of **Institute Scholarship** (Ministry of Human Resource Development, India) for Post-graduate Studies (Both ***M.Tech. and PhD***).
- Recipient of **Journal Cash Award** from ***Dean Resource & Alumni, IIT Kanpur*** for the session 2013-14.
- Recipient of **Gold Medal** from ***University of Calcutta*** due to securing ***first position*** in ***M.Tech*** in Radiophysics and Electronics in 2008.
- Recipient of **Merit certificates** for academic proficiency in the final year of ***Bachelor of Science, Scottish Church College***.
- Recipient of **Kanodia Research Scholarship** in 2006 from ***University of Calcutta***, Kolkata, India.

- Recipient of **First prize** from ***IEEE LEOS Chapter Calcutta Section*** for delivering lecture at a **students' lecture competition** held on 24th December, 2005 at Ionospheric Field Station at Haringhata of Institute of Radiophysics & Electronics.
- Co-author of **Best Paper Award** in Sessions 1 and 3 of ***Sixth Annual Conference of Antenna Test and Measurement Society of INDIA (ATMS)*** held in Kolkata during 11-13 February, 2013.
- Co-author of **Best Paper Award** in Session of ***Fifth Annual Conference of Antenna Test and Measurement Society of INDIA (ATMS)*** held in Mumbai during 2-3 February, 2012.
- Recipient of **Merit certificates** for ***Bachelor of Science, Higher Secondary and Madhyamik Examinations***.
- Recipient of **Award (Prize Winner)** of ***Science Aptitude & Talent Search Test***.

AREAS OF RESEARCH INTEREST

Metasurface, Microwave Absorber, Terahertz Structures, Graphene-based structures, Frequency Selective Surface, Radio Astronomy Techniques, Optical Communications.

LIST OF PUBLICATIONS

(a) Book Chapters (In Compendia):

1. Nilotpal, and **Somak Bhattacharyya**, "Metamaterial-based high-Performance Radar Absorbing Structure," ***Handbook of Metamaterial-Derived Frequency Selective Surfaces, Springer Nature Publications***, chapter 2, pp. 63-108, 2022. (Print ISBN: 978-981-16-6441-0) (https://link.springer.com/referencework/10.1007/978-981-16-6441-0) DOI: 10.1007/978-981-16-6441-0_2
2. Rajan Agrahari, Sambit Kumar Ghosh, and **Somak Bhattacharyya**, "Optical Switches," ***Optical Switching Device Technology and Application in Network, Wiley***, chapter 1, pp. 13-30, 2022. (Print ISBN: 9781119819233) (https://onlinelibrary.wiley.com/doi/book/10.1002/9781119819264) DOI: 10.1002/9781119819264
3. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Recent Advancement in Graphene-Based Metasurface Structures," ***Cutting-Edge Research on Low-Dimensional Nanoelectronic Devices: Physics and Material Science Aspects, Apple Academic Press***, chapter 5, pp.119-151, 2022. (Print ISBN: 9781774638668) (https://www.appleacademicpress.com/low-dimensional-nanoelectronic-devices-theoretical-analysis-and-cutting-edge-research/9781774638668) DOI: https://doi.org/10.1201/9781003277378
4. **Somak Bhattacharyya**, "Metamaterials and Metasurfaces for High Frequency Applications," ***Photonics, Plasmonics and Information Optics: Research and Technological Advances, CRC Press***, chapter 3, pp. 31-65, 2021. (Print ISBN: 978-0-367-49952-5) (https://www.taylorfrancis.com/chapters/edit/10.1201/9781003047193-3/metamaterials-metasurfaces-high-frequency-applications-somak-bhattacharyya) DOI: https://doi.org/10.1201/9781003047193

(b) Journal Papers:

59. Nikhil Kumar, Sambit Kumar Ghosh, and **Somak Bhattacharyya**, "Thermally Switchable Metasurface for Controlling Transmission in the THz-gap," accepted for publication in ***Plasmonics (Springer Nature)***.

58. Nilotpal, P. Chakrabarti, and **Somak Bhattacharyya**, "Analysis of a double-sided metasurface structure for the design of multifunctional and directional insensitive devices," accepted for publication in ***IETE Journal of Research (Taylor & Francis)***.

57. Sougata Chatterjee, Yashwant Gupta, Sambit Kumar Ghosh, and **Somak Bhattacharyya**, "RFI Mitigation of Radio Astronomical Receiver using a Low-profile Metasurface-loaded Antenna," ***IEEE Transaction on Electromagnetic Compatibility***, vol. 66, no. 1, pp. 108-117, Feb. 2024. (DOI: https://doi.org/10.1109/TEMC.2023.3331181)

56. Diptiranjan Samantaray, and **Somak Bhattacharyya**, "A Metasurface-backed Planar Low-Profile Dual-Band Monopole Antenna," ***Journal of Electromagnetic Waves and Applications (Taylor & Francis)***, vol. 37, no. 7-9, pp. 884-897, 2023. (DOI: https://doi.org/10.1080/09205071.2023.2214684)

55. Rajan Agrahari, Satyesh Singh, Diptiranjan Samantaray, Bambam Kumar, **Somak Bhattacharyya**, Manpuran Mahto, and Pradip Kumar Jain, "Triple-Band Metasurface Absorber for RF Energy Harvesting Applications," ***Microwave and Optical Technology Letters (Wiley)***, vol. 65, issue 8, pp. 2252-2261, August 2023. (DOI: https://doi.org/10.1002/mop.33728)

54. Madhavi Chandra, Nilotpal, Diptiranjan Samantaray, M Thottappan, and **Somak Bhattacharyya**, "A Broad Band Transmissive Type Metasurface Cross-Polarization Converter for EMC Application," ***IEEE Transaction on Electromagnetic Compatibility***, vol. 65, no. 1, pp. 186-194, February 2023. (DOI: 10.1109/TEMC.2022.3213833)

53. Diptiranjan Samantaray, Sambit Kumar Ghosh, and **Somak Bhattacharyya**, "Modified Slotted Patch Antenna with Metasurface as Superstrate for Dual-band Applications," ***IEEE Antennas and Wireless Propagation Letters***, vol. 22, issue 1, pp. 109-113, January 2023. (DOI: 10.1109/LAWP.2022.3204180)

52. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Terahertz Wave Conversion from Linear to Circular Polarization by Graphene Metasurface Featuring Ultrawideband Tunability," ***IEEE Journal of Lightwave Technology***, vol. 40, no. 20, pp. 6676-6684, October 2022. (DOI: 10.1109/JLT.2022.3156640)

51. Sambit Kumar Ghosh, Anirban Chaudhuri, Parama Pal, Beena Rai, Santanu Das, and **Somak Bhattacharyya**, "A Broadband Biosensor using Graphene-Metasurface Based Cross-Polarization Converter," ***IEEE Sensors Journal***, vol. 22, no. 13, pp. 12820-12828, July, 2022. (DOI: 10.1109/JSEN.2022.3176381)

50. Ansuman Shubham, Diptiranjan Samantaray, Sambit Kumar Ghosh, Smrity Dwivedi, and **Somak Bhattacharyya**, "Performance Improvement of a Graphene Patch Antenna using Metasurface for THz Applications," ***Optik (Elsevier)***, vol. 64, article no. 169412, August 2022. (https://doi.org/10.1016/j.ijleo.2022.169412)

49. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Graphene-Based Metasurface for Tunable Absorption and Transmission Characteristics in the Near Mid-Infrared Region," ***IEEE Transactions on Antennas and Propagation***, vol. 70, no. 6, pp. 4600-4612, June 2022. (**Top accessed paper of IEEE Transactions on Antennas and Propagation, June 2022**; DOI: 10.1109/TAP.2022.3140904)

48. Rajan Agrahari, Akhlesh Lakhtakia, P. K. Jain, and **Somak Bhattacharyya**, "Pixelated Metasurfaces for Linear-Polarization Conversion and Absorption," ***Journal of Electromagnetic Waves and Applications (Taylor & Francis)***, vol. 36, issue 7, pp. 1008-1019, 2022. (DOI: https://doi.org/10.1080/09205071.2021.1998928)

47. Ananga Paul, Nilotpal, **Somak Bhattacharyya**, and Smrity Dwivedi, "A digital metasurface for selective information distribution in spatial domain at THz region," ***Applied Optics (OSA, erstwhile Optica)***, vol. 61, issue 7, pp. 1624-1631, 2022. (DOI: https://doi.org/10.1364/AO.448356)

46. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Graphene-Based Dual Functional Metadevice in Terahertz Gap," ***Applied Optics (OSA, erstwhile Optica)***, vol. 60, issue 36, pp. 11247-11255, 2021. (DOI: https://doi.org/10.1364/AO.444873)

45. Vineet Singh, **Somak Bhattacharyya**, and P. K. Jain, "Deep Neural Network Based Target Separation from Mixed Micro-Doppler Signature of Multiple Moving Targets," ***Journal of Electromagnetic Waves and Applications (Taylor & Francis)***, vol. 35, issue 17, pp. 2269-2282, 2021. (DOI: https://doi.org/10.1080/09205071.2021.1943002)

44. Ananga Paul, Nilotpal, **Somak Bhattacharyya**, and Smrity Dwivedi, "Design and mathematical analysis of a metasurface-based THz bandpass filter with an equivalent circuit model," ***Applied Optics (OSA, erstwhile Optica)***, vol. 60, issue 22, pp. 6429-6437, 2021. (DOI: https://doi.org/10.1364/AO.431821)

43. Lavesh Nama, Nilotpal, **Somak Bhattacharyya**, and Pradip K. Jain, "A Metasurface-based Ultra-thin Dual-band Linear to Circular Reflective Polarization Converter," ***IEEE Antennas and Propagation Magazine (Feature Article)***, vol. 63, no. 4, pp. 100-110, Aug. 2021. (DOI: 10.1109/MAP.2020.3043460)

42. Manikant Jha, Diptiranjan Samantaray, and **Somak Bhattacharyya**, "A THz Antenna with Sandwiched Metasurface for Quadband Application," ***Optics Communications (Elsevier)***, vol. 493, article no. 126995, August 2021. (DOI: https://doi.org/10.1016/j.optcom.2021.126995)

41. Diptiranjan Samantaray, and **Somak Bhattacharyya**, "A Metasurface Based Gain Enhanced Dual Band Patch Antenna Using SRRs with Defected Ground Structure," ***Radio Science (AGU)***, vol. 56, issue 2, Article No. 2020RS007192, February 2021. (**Top Cited Paper from Wiley in 2021-22**; DOI: https://doi.org/10.1029/2020RS007192)

40. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Transmittive-type Triple-band Linear to Circular Polarization Conversion in THz Region using Graphene-Based Metasurface," ***Optics Communications (Elsevier)***, vol. 480, article no. 126480, February 2021. (DOI: https://doi.org/10.1016/j.optcom.2020.126480)

39. Aman, Vineet Singh, Nilotpal, and **Somak Bhattacharyya**, "A Free Space Frequency-Time-Domain Technique for Electromagnetic Characterization of Materials Using Reflection-Based Measurement," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 31, issue 1, Article No. e22490, January 2021. (DOI: https://doi.org/10.1002/mmce.22490)

38. Rajarshi Bhattacharyya, Vivek Kumar Singh, **Somak Bhattacharyya**, Pralay Maiti, and Santanu Das, "Defect Reconstruction in Graphene for Excellent Broadband Absorption Properties with Enhanced Bandwidth," ***Applied Surface Science (Elsevier)***, vol. 537, article no.147840, January 2021. (DOI: https://doi.org/10.1016/j.apsusc.2020.147840)

37. Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Graphene Based Metasurface with Near Unity Broadband Absorption in the Terahertz Gap," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 30, issue 12, article no. e22436, December 2020. (**Top Cited Paper from Wiley in 2020-21**; DOI: https://doi.org/10.1002/mmce.22436)

36. Pankaj Kumar, Smriti Rai, **Somak Bhattacharyya**, Akhlesh Lakhtakia, and Pradip Kumar Jain, "Graphene-Sandwich Metasurface as a Frequency Shifter, Switch, and Isolator at Terahertz Frequencies," ***Optical Engineering (SPIE)***, vol. 59, issue 11, pp. 110501, November 2020. (DOI: https://doi.org/10.1117/1.OE.59.11.110501)

35. Govindam Sharma, Akhlesh Lakhtakia, **Somak Bhattacharyya**, and Pradip K. Jain, "Magnetically Tunable Metasurface Comprising InAs and InSb pixels for absorbing terahertz radiation," ***Applied Optics (OSA, erstwhile Optica)***, vol. 59, issue 31, pp. 9673-9680, November 2020. (DOI: https://doi.org/10.1364/AO.405023)

34. Nilotpal, **Somak Bhattacharyya**, and P. Chakrabarti, "Mathematical Interpretation of Wave Propagation, Standing Wave Resonance and Absorption in a Metasurface Absorber," ***Optical Engineering (SPIE)***, vol. 59, issue 10, pp. 107102, October 2020. (DOI: https://doi.org/10.1117/1.OE.59.10.107102)

33. Diptiranjan Samantaray, and Somak Bhattacharyya, "A Gain-Enhanced Slotted Patch Antenna Using Metasurface as Superstrate Configuration," ***IEEE Transactions on Antennas and Propagation***, vol. 68, issue 9, pp. 6548-6556, September 2020. (DOI: 10.1109/TAP.2020.2990280)

32. Aman, Vineet Singh, and **Somak Bhattacharyya**, "Retrieval of Electrical and Physical Properties of Dielectric Samples Using Time Domain Multiple Reflection Method," ***IET Microwaves, Antennas and Propagation***, vol. 14, issue 8. pp. 701-706, July 2020. (DOI: 10.1049/iet-map.2019.0203)

31. Vineet Singh, **Somak Bhattacharyya**, and P. K. Jain, "Micro-Doppler Classification of Human Movements using Spectrogram Spatial Features and Support Vector Machine (SVM)," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 30, issue 8, article no. e22264, August 2020. (DOI: https://doi.org/10.1002/mmce.22264)

30. Sambit Kumar Ghosh, Vinit Singh Yadav, Santanu Das, and **Somak Bhattacharyya**, "Tunable Graphene Based Metasurface for Polarization-Independent Broadband Absorption in Lower Mid Infrared (MIR) Range," ***IEEE Transactions on Electromagnetic Compatibility***, vol. 62, issue 2, pp. 346-354, April 2020. (DOI: 10.1109/TEMC.2019.2900757)

29. Nilotpal, Aman, **Somak Bhattacharyya**, and P. Chakrabarti, "Frequency and time-domain analyses of multiple reflections and interference phenomena in a metamaterial absorber," ***Journal of Optical Society of America B (OSA, erstwhile Optica)***, vol. 37, issue 3, pp. 586-592, March 2020. (DOI: https://doi.org/10.1364/JOSAB.381191)

28. Soham Ghosh, Sohom Das, Diptiranjan Samantaray, and **Somak Bhattacharyya**, "Meander Line based Defected Ground Microstrip Antenna slotted with SRR for Terahertz range," ***Engineering Reports (Wiley)***, vol. 2, issue 1, article no. e12088, January 2020. (DOI: https://doi.org/10.1002/eng2.12088)

27. Diptiranjan Samantaray, **Somak Bhattacharyya**, and K. V. Srinivas, "A Modified Fractal-shaped Slotted Patch Antenna with Defected Ground using Metasurface for Dual band Applications," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 29, issue 12, article no. e21932, December 2019. (DOI: https://doi.org/10.1002/mmce.21932)

26. Rajarshi Bhattacharyya, Om Prakash, Somnath Roy, Akhilendra Pratap Sigh, Tapas Kumar Bhattacharyya, Pralay Maiti, **Somak Bhattacharyya**, and Santanu Das, "Graphene oxide-ferrite hybrid framework as enhanced broadband absorption in gigahertz frequencies," ***Scientific Reports (Nature)***, vol. 9, article No. 12111, August 2019. (DOI: https://doi.org/10.1038/s41598-019-48487-5)

25. Nilotpal, Lavesh Nama, **Somak Bhattacharyya**, and P. Chakrabarti, "A Metasurface-based Broadband Quasi Non-dispersive Cross Polarization Converter for Far Infrared Region," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 29, issue 10, article No. e21889, October 2019. (DOI: https://doi.org/10.1002/mmce.21889)

24. Akhlesh Lakhtakia, **Somak Bhattacharyya**, and Sambit Kumar Ghosh, "Comment on: Wide incidence angle and polarization insensitive dual broad-band metamaterial absorber based on concentric split and continuous rings resonator structure," ***Materials Research Express (IOP)***, Vol. 6, no. 8, pp. 088002, 2019. (DOI: http://dx.doi.org/10.1088/2053-1591/ab2220)

23. Vineet Singh, **Somak Bhattacharyya**, and P. K. Jain, "Implementation of a simple stepped frequency continuous wave target localization system comprising two antennas based on common region of sensing," ***International Journal of RF and Microwave Computer-Aided Engineering (Wiley)***, vol. 29, issue 8, article No. e21795, August 2019. (DOI: https://doi.org/10.1002/mmce.21795)

22. Rajarshi Bhattacharyya, Somnath Roy, Om Prakash, Akhilendra Pratap Singh, Tapas Kumar Bhattacharyya, Pralay Maiti, **Somak Bhattacharyya**, and Santanu Das, "Mg0.5Zn0.5Fe2O4-polyurethane thin nanocomposite coating as broadband microwave absorber," ***Applied Sciences (Springer Nature)***, Vol. 1, Issue 1, Article No. 38, January 2019. (DOI: 10.1007/s42452-018-0041-8)

21. Vinit Singh Yadav, Sambit Kumar Ghosh, Santanu Das, and **Somak Bhattacharyya**, "Wideband Tunable Mid-infrared Cross-polarization Converter Using Monolayered Graphene-Based Metasurface over A Wide

Angle of Incidence," ***IET Microwaves, Antennas and Propagation***, vol. 13, issue 1, pp. 82-87, January 2019. (DOI: 10.1049/iet-map.2018.5373)

20. Vinit Singh Yadav, Sambit Kumar Ghosh, **Somak Bhattacharyya**, and Santanu Das, "Graphene Based Metasurface for Tunable Broadband Terahertz Cross Polarization Converter over Wide Angle of Incidence," ***Applied Optics (OSA, erstwhile Optica)***, Vol. 57, Issue 29, pp. 8720-8726, October 2018. (DOI: https://doi.org/10.1364/AO.57.008720)

19. Praneet Munaga, **Somak Bhattacharyya**, Saptarshi Ghosh, and Kumar Vaibhav Srivastava, "An Ultra-thin Compact Polarization-Independent Hexa-Band Metamaterial Absorber," ***Applied Physics A (Springer Nature)***, vol. 124, issue 4, article no. 331, April 2018. (DOI: 10.1007/s00339-018-1751-x)

18. **Somak Bhattacharyya**, Saptarshi Ghosh, and Kumar Vaibhav Srivastava, "A Wideband Cross Polarization Conversion using Metasurface," ***Radio Science (AGU)***, vol. 52, issue 11, pp. 1395-1404, November 2017. (DOI: 10.1002/2017RS006396)

17. **Somak Bhattacharyya**, "A Broadband Microwave Metamaterial Absorber with Octave Bandwidth," ***MAPAN Journal of Metrology Society of India (Springer Nature)***, vol. 31, issue 4, pp. 299-307, December 2016. (DOI: 10.1007/s12647-016-0180-6)

16. Saptarshi Ghosh, **Somak Bhattacharyya**, and Kumar Vaibhav Srivastava, "Design, Characterization and Fabrication of a Broadband Polarization-Insensitive Multi-Layer Circuit Analog Absorber," ***IET Microwaves, Antennas and Propagation***, vol. 10, Issue 8, pp. 850-855, 2016. (DOI: 10.1049/iet-map.2015.0653)

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107. Saptarshi Ghosh, Debdeep Sarkar, **Somak Bhattacharyya**, and Kumar Vaibhav Srivastava, "Design of an Ultra Thin Dual Band Microwave Metamaterial Absorber," pp. 38-41, 12-13 February, 2013, in ***Sixth Annual Conference, Antenna Test and Measurement Society***, Hotel Pride, Kolkata, India.

108. **Somak Bhattacharyya**, Hitesh Baradiya, and Kumar Vaibhav Srivastava, **"**An Ultra Thin Metamaterial Absorber using Electric Field Driven LC Resonator with Meander Lines," in ***IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting***, pp. 1-2, 8-13 July, 2012, Chicago, USA. (ISSN: 1522-3965)
(http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6349297)
DOI: 10.1109/APS.2012.6349297

109. **Somak Bhattacharyya**, and Kumar Vaibhav Srivastava, "Ultra Thin Metamaterial Absorbers using Electric Field Driven LC (ELC) Resonator Structure," in ***Progress In Electromagnetics Research Symposium***, pp. 314-317, 27-30 March, 2012, Kuala Lumpur, Malaysia. (ISSN: 1559-9450)
(http://piers.org/piersproceedings/download.php?file=cGllcnMyMDEyS3VhbGFMdW1wdXJ8MVA2XzAzMTQucGRmfDExMTAyMDA4MzA1OA==)

110. Hitesh Baradiya, **Somak Bhattacharyya**, and Kumar Vaibhav Srivastava, "Retrieval of Constitutive Parameters of Ultrathin ELC Resonator as Microwave Absorber," pp. 15-18, 27-31 May, 2012, in ***Indian Antenna Week 2012***, Royal Hotel, Gangtok, India.

111. Raghvendra Kumar Chaudhary, **Somak Bhattacharyya**, Kumar Vaibhav Srivastava, and Animesh Biswas, "Design of a Wide-Band Dual Segment Half-split Cylindrical Dielectric Resonator Antenna," pp. 58-61, 2-3 February, 2012, in ***Fifth Annual Conference, Antenna Test and Measurement Society***, Hotel Orchid, Mumbai, India.
(http://www.atmsindia.org/tech_papers/design_of_microstrip_patch_antennas/Design-of-a-Wide-Band-Dual-Segment-Half-split.doc)

112. **Somak Bhattacharyya**, Hitesh Baradiya, Raghvendra Kumar Chaudhary, and Kumar Vaibhav Srivastava, "An Electric Field Driven LC Resonator Structure as Ultra Thin Metamaterial Absorber," pp. 62-65, 2-3 February, 2012, in ***Fifth Annual Conference, Antenna Test and Measurement Society***, Hotel Orchid, Mumbai, India.
(http://www.atmsindia.org/tech_papers/design_of_microstrip_patch_antennas/An-Electric-Field-Driven-LC-Resonator-Structure%20as.doc)

113. Subal Kar, **Somak Bhattacharyya**, Sujoy Mondal, Kasturi Mukherjee, Dibakar Deb, and Dipankar De Sarkar, "Scale Model Hardware Characterization of an Optical Phase-locked Loop (OPLL) Microwave Photonic Transmitter," ***Progress In Electromagnetics Research Symposium***, 2-6 July, 2008, MIT, USA.

114. Subal Kar, Dipankar De Sarkar, Paramita Das, Sudipta Banerjee, and **Somak Bhattacharyya**, "Computer-aided Analysis of an Optical Heterodyning Scheme for Ultra-Stable Microwave Signal Generation and Its Scale-model Hardware Characterization," ***Progress In Electromagnetics Research Symposium***, 2-6 July, 2008, MIT, USA.

115. **Somak Bhattacharyya,** S.Sureshkumar, A.Praveenkumar, and Ashik Paul, "Design, Analysis and Implementation of a Broadband Link for GMRT," ***Electronic Devices Communications and Computers (EDCC), 2008***, 20 June, 2008, Kolkata, India.

116. Shubhendu Joardar, and **Somak Bhattacharyya**, "Measurement of Polarization Characteristics of a Planar Log-Periodic Antenna with an Innovative Step-Lane Reflector," ***National Conference on Engineering Education (NCEE), 2008***, 9-10 February, 2008, Academy of Technology, Hooghly, India.

117. **Somak Bhattacharyya,** Arjun Mandal, Subimal Majee, and Soumo Ghosal, "Popularity of Raman Amplifier in Optical Fiber Technology," ***Physics & Technology of All-Optical Communications and Devices, 2007***, 11-16 October, 2007, Department of Physics & Meteorology, Indian Institute of Technology, Kharagpur, India.
(http://www.phy.iitkgp.ernet.in/ptaccd2/Participants_manuscript/manuscript_SomakBhattacharya.pdf)

118. Arjun Mandal, **Somak Bhattacharyya**, Sujoy Mondal, and Abhijit Banerjee, "Organic Light Emitting Diode Technology (OLED)," ***WieNSET-2007***, 29-30 June, 2007, West Bengal University of Technology, Kolkata, India.

(e) Technical Reports:

1. **Somak Bhattacharyya**, and S.Sureshkumar, "Broadband Analog Fiber Optic Link Performance – A MATLAB Simulation," ***Internal Technical Report, GMRT***, 2008. (http://ncralib1.ncra.tifr.res.in:8080/jspui/handle/2301/434)
2. **Somak Bhattacharyya**, and S.Sureshkumar, "Performance, Analysis and implementation of Analog Broadband Link for GMRT," ***Internal Technical Report, GMRT***, 2008. (http://ncralib1.ncra.tifr.res.in:8080/jspui/handle/2301/379)
3. **Somak Bhattacharyya**, and Shubhendu Joardar, "Measurement of Polarization Characteristics of a Planar Log-Periodic Antenna with an Innovative Step-Lane Reflector," ***Internal Technical Report, GMRT***, 2005**.** (http://ncralib1.ncra.tifr.res.in:8080/jspui/handle/2301/343)

(f) Other Reports:

1. **Somak Bhattacharyya**, "Report on the IIT (BHU) Varanasi Student Branch Chapter Activities for 2022 [MTT-S Society News]," in ***IEEE Microwave Magazine***, vol. 24, no. 6, pp. 86-89, June 2023. (https://ieeexplore.ieee.org/document/10121520) DOI: 10.1109/MMM.2023.3256394
2. **Somak Bhattacharyya**, "Report of Webinar on "Opportunity in Chaos (Next-Generation Wireless Technologies)" [Young Professionals]," in ***IEEE Microwave Magazine***, vol. 24, no. 2, pp. 86-87, Feb. 2023. (https://ieeexplore.ieee.org/document/10004769) DOI: 10.1109/MMM.2022.3218237
3. **Somak Bhattacharyya**, "Microwave Education by the MTT-S Student Branch Chapter IIT-BHU Varanasi [MTT-S Society News]," in ***IEEE Microwave Magazine***, vol. 24, no. 1, pp. 27-90, Jan. 2023. (https://ieeexplore.ieee.org/document/9966361) DOI: https://doi.org/10.1109/MMM.2022.3211604
4. **Somak Bhattacharyya,** "Report on 2020-2021 Activities from IEEE Chapters and Student Branches in India [MTT-S Society News]," ***IEEE Microwave Magazine***, vol. 23, issue 2, pp. 23-32, Feb. 2022. (https://ieeexplore.ieee.org/document/9676506) DOI: https://doi.org/10.1109/MMM.2021.3125511
5. **Somak Bhattacharyya,** "Microwave Education by the IEEE MTT-S Student Branch Chapter IIT BHU Varanasi, India, During COVID-19 [MTT-S Society News]," ***IEEE Microwave Magazine***, vol. 22, issue 10, pp. 74-76, Oct. 2021. (https://ieeexplore.ieee.org/document/9529119) DOI: 10.1109/MMM.2021.3095976
6. **Somak Bhattacharyya**, "URSI-RCRS 2020 Report," ***IEEE Antennas and Propagation Magazine***, vol. 62, issue 5, pp. 13-15, October 2020. (https://ieeexplore.ieee.org/document/9214935) DOI: https://doi.org/10.1109/MAP.2020.3014528

PATENTS

S. Das, R. Bhattacharyya, **S. Bhattacharyya**, P. Maiti, Preparation of graphene-oxide nanocomposites based sprayable paint and making of a large-scale coating with superior broadband absorptivity in the range of GHz frequency (2019) (Patent Application No: 201911008550, Grant No. 413062).

SPONSORED PROJECTS

1. Development of Frequency Selective Metasurfaces at Microwave Frequencies**,** ***Seed Grant, IIT (BHU) Varanasi,*** INR 10 Lakhs, 2017-18.
2. Study, Design and Implementation of Frequency Selective Metasurfaces for Microwave Applications**,** ***Early Career Research Award (ECRA), Science and Engineering Research Board (SERB),*** (ECR/2017/001485), INR 46.7 Lakhs, 2018-21. (Completed)
3. Metasurface-based Sensor Devices for mm-wave and sub-terahertz Applications, ***Core Research Grant (CRG), Science and Engineering Research Board (SERB)***, (CRG/2021/000947), INR 56.21 Lakhs, 2022-25.

4. Metasurface-based various components for applications in microwave range and beyond, ***Indian Space Research Organization (ISRO)***, (DS_2B-13012(2)/26/2022-Sec.2), INR 25.33 Lakhs, 2022-25.

CONFERENCE ORGANIZED

- 2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)**,** ***IIT (BHU) Varanasi,*** 12-14 February, 2020. (https://conferences.iitbhu.ac.in/URSI-RCRS2020/)

SHORT TERM COURSE ORGANIZED

- Recent Advances on Passive and Active Components at High Frequencies**,** ***IIT (BHU) Varanasi,*** 25-30 June, 2018.

PH.D. THESES SUPERVISION

Name of the Student	Supervisor	Co-Supervisor	Thesis Title	Status
Dr. Vineet Singh	Prof. P. K. Jain	Dr. Somak Bhattacharyya	Signature Detection of the Indoor Objects using Microwave Imaging and Ranging Systems	*Awarded (Defended on 3 February, 2021)*
Dr. Diptiranjan Samantaray	Dr. Somak Bhattacharyya		Study of High-Performance Metasurface Antenna in Microwave Frequencies	*Awarded (Defended on 5 July, 2022)*
Dr. Nilotpal	Dr. Somak Bhattacharyya	Prof. P. Chakrabarti	Study of Metasurfaces in Terahertz Domain	*Awarded (Defended on 15 July, 2022)*
Dr. Sambit Kumar Ghosh	Dr. Somak Bhattacharyya	Dr. Santanu Das	Study of Graphene-based Metasurface Structures for Terahertz Frequency Applications	*Defended (22 December, 2022)*
Mr. Sougata Chatterjee	Dr. Somak Bhattacharyya			*In Progress*
Mr. Deepak Ram	Dr. Somak Bhattacharyya	Dr. Amit Kumar Singh		*In Progress*
Ms. Kirti	Dr. Somak Bhattacharyya	Dr. Shivam Verma		*In Progress*
Mr. Ajeet Singh Verma	Dr. Somak Bhattacharyya			*In Progress*
Mr. Vishnu Kumar Mishra	Dr. Somak Bhattacharyya	Dr. M. Thottappan		*In Progress*
Mr. Sagar Bhattacharya	Dr. M. Thottappan	Dr. Somak Bhattacharyya		*In Progress*

M.TECH THESES SUPERVISION

Name of the Student	Thesis Title	Status	Remark
Mr. Ankur Bakliwal	Design and Development of Chiral Metasurface for Linear to Circular Conversion	*Awarded* (2017)	Supervisor: Dr. M. K. Meshram

Mr. Vinit Singh Yadav	Study of Dual band and Wideband Cross Polarization Converters using Graphene-based Metasurfaces	*Awarded* (2018)	
Mr. Lavesh Nama	Study of Cross Polarization Converters and Circular Polarization Converters using Metasurfaces in Gigahertz Range	*Awarded* (2019)	
Mr. Aman	A Free Space Time Domain Technique for the Reconstruction of Electromagnetic Properties and Thickness of the Dielectric Material	*Awarded* (2019)	
Ms. Smriti Rai	Study of Pixelated Metaatom Approach Towards Reconfigurability	*Awarded* (2019)	
Mr. Atul Tiwari	Transmit Antenna Selection using Machine Learning	*Awarded* (2019)	Supervisor: Dr. K.V. Srinivas
Mr. Manikant Jha	Studies of Antenna at Terahertz Frequency Band employing Metasurface	*Awarded (2020)*	
Mr. Ansuman Shubham	A Graphene Based Metasurface Patch Antenna for THz Applications	*Awarded (2021)*	Co-Supervisor: Dr. Smrity Dwivedi
Mr. Ananga Paul	Terahertz Metasurface Devices for Different Application	*Awarded (2021)*	Supervisor: Dr. Smrity Dwivedi
Ms. Madhavi Chandra	Transmittive type Metasurface based Polarization Converters	*Awarded (2022)*	Co-Supervisor: Dr. M. Thottappan
Mr. Sayantan Pal	Study of Broadband Cross Polarization Converter and Dual-band Absorber using Two-dimensional MXene-based Metasurfaces	*Awarded (2022)*	Supervisor: Dr. Santanu Das (Ceramic Engg.)
Mr. Ashwani Kumar Singh	Study of Metasurface-based Bandstop Filters for Multiband Applications	*Awarded (2022)*	Worked since March, 2022

B.TECH PROJECT SUPERVISION

Title of Project	**Name(s) of Student(s)**	**Year of Completion**	**Remarks**
Study of RFID Patch Antenna	Ankur Agrawal	2024	
	Bisesh Agarwal		
	Kaivalyae Anil P		
	Shreyansh Jain		
Design and Simulation of LNA Circuit using Active Devices in ADS	Chaithanya Krishna	2024	
	Rishikesh Kumar		
	Yash Tewatia		
	Gokul Patel		
Design of an Antenna for a Wireless Sensor Network for Trains	Mr. Yathart Bhargava	2023	
	Mr. Akshat Sood		
	Mr. Indla Yashwant		

	Kumar Mr. Prince Kumar Gond		
Antenna Optimization using Machine Learning	Mr. Chirag Yaduwanshi Mr. Sourabh Ahirwar Ms. Manasy Rajesh Panicker	2023	
LNA Design For Radio Astronomy	Mr. Aditya Prakash Gupta Mr. Sunny Kumar Ms. Dipti Dhakar	2022 2022	
Hybrid Deep Reinforcement Learning Based Optimization for Sidelobe Level Suppression of a Parabolic Reflector Antenna	Mr. Easwaravaka Dinesh Reddy Mr. Sirusala Niranth Sai Mr. Harshit Gupta Mr. Sushil kalwa	2022	
Tunable Terahertz Metamaterial Filter	Mr. R. A. D. S. Abhijith Mr. Banoth Mahesh	2021	• The work has been presented in URSI General Assembly 2021, Rome by Mr. R. A. D. S. Abhijith. • The work presented by Mr. R. A. D. S. Abhijith has bagged the best in student project competition organized by IEEE Antenna and Propagation Society Jaipur Chapter.
Antenna Performance Enhancement using Metasurface	Mr. Amlan Saha Mr. Shubham Guleria Mr. Yathart Gupta	2021	
Design of Microstrip Antenna for 5G Application	Mr. Pendem Leela Venkat Mr. Vuppu Sritharun Mr. Vuppu Sricharan	2020	
Metasurface and its equivalent circuits	Mr. Aman Gupta Mr. Sai Jagadeesh Ambati Mr. Ashutosh Jaiswal Ms. Shreya Padgalwar	2020	
Spin Coater	Mr. Abhay Raghav Mr. Abhishek Khetrapal Mr. Abhishek Priyadarshi Mr. Sagar Aglawe	2019	Initially assigned and started working with Prof. P. Chakrabarti

	Mr. Akash Gupta Ms. Sakshi Tewari		
Design of High Gain SIW Antenna	Mr. Abhijeet Singh Mr. Hardik Singla Mr. Prateek Bhadauria Mr. Chandan Kumar	2019	
Design and Implementation of Non-Invasive Glucometer	Mr. Shubham Agarwal Mr. Khajjayam Sai Teja	2019	2nd prize in 10th Inter-University Engineering, Science &Technology Academic Meet 2019

PROJECT SUPERVISION

Name of Student	Position	Duration
Mr. Nikhil Kumar	Junior Research Fellow (JRF)	*27 June, 2022 – 7 July, 2023*
Mr. Chiutha Raju	Junior Research Fellow (JRF)	*24 February, 2023 – 24 April, 2023*
Mr. Ravi Kumar	Junior Research Fellow (JRF)	*21 August, 2023 – Till Date*

INTERNSHIPS SUPERVISION

Name of Student	Institute	Duration & Year
Mr. Dhiraj Jha	NIT Arunachal Pradesh	*June-July, 2017*
Mr. Mukuljeet Singh	IIIT Allahabad, Uttar Pradesh	*June-July, 2017*
Ms. Roopan	Punjabi University, Patiala, Punjab	*January – May, 2018*
Mr. Rudranil Nandi Mr. Suman Mallick Mr. Tanmoy Chakrabarti Mr. Soham Ghosh Mr. Sohom Das Mr. Sambuddha Sarkar	Academy of Technology, West Bengal	*May – July, 2018*
Mr. Mohd. Salman Khan	Thapar Institute of Engineering & Technology, Patiala, Punjab	*January – June, 2019*
Ms. Meghna Mishra	Shri Mata Vaishno Devi University, Jammu	*June-July, 2019*
Mr. Apratim Chatterjee Mr. Dweepayan Sen Sharma	Swami Vivekananda Institute of Science & Technology, West Bengal	*June-July, 2019*
Mr. Anand Krishnan Ms. Anchillia Philip Ms. Bhavana R Nair Mr. Krishna Chandran P L	Government Engineering College, Barton Hill, Trivandrum, Kerala	*June-August, 2019* *June-August, 2019*

Mr. Nikhil N B	Government Engineering College, Barton Hill, Trivandrum, Kerala	
Ms. Meghna Mishra	Shri Mata Vaishno Devi University, Jammu	*January-May, 2020*
Ms. Muskaan Dhasmana	Jaypee Institute of Information Technology, Noida	*June-July, 2021*
Mr. Aman Khan	Don Bosco Institute of Technology, Mumbai	*June-August, 2021*
Mr. Solomon Steven		
Mr. Hitesh Badgujar		
Mr. Sadanand Chauhan		
Ms. Oindrila Biswas	Heritage Institute of Technology, Kolkata	*September-October, 2021*
Ms. Joyati Das		
Mr. Apratim Chatterjee	Heritage Institute of Technology, Kolkata	*March-April, 2022*
Mr. Wriddheman Bhattacharyya (Under SSR Scheme of SERB)	Indian Institute of Information Technology Ranchi	*June-July, 2022*
Ms. Ritika Verma	Institute of Engineering and Rural Technology-Prayagraj	*June-August, 2022*
Ms. Sneha Mukhopadhyay	Institute of Engineering & Management, Kolkata	*January-February, 2023*
Ms. Kriti Srivastava	Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj	*January-February, 2023*
Mr. Nitin Manoj	National Institute of Technology, Patna	*June, 2023*
Ms. Sakshi Singh		
Mr. Kamisetti Sasank	Vignan's Institute of Information Technology, Visakhapatnam	*June-July, 2023*
Mr. Munasa Yuvaraju		
Mr. Anoop Pandey	Jamia Millia Islamia, New Delhi	*June-July, 2023*

PH.D. THESIS

Topic: ***Studies on Ultra-thin Microwave Metamaterial Absorber for Multiband and Wideband Applications***

Supervisor: Dr. Kumar Vaibhav Srivastava, Electrical Engineering Dept, Indian Institute of Technology, Kanpur

COURSES UNDERTAKEN DURING PH.D

- Organic Electronics (EE611)
- Semiconductor Device Modelling (EE616)
- Integrated Circuit Fabrication Technology (EE618)
- Quantum Electronics (PHY644)

- Advanced Engineering Electromagnetics (EE641)
- Microwave Measurements and Design (EE647)

TERM-PAPERS DURING PH.D.

- *Backscattering Measurements from Objects by using RADAR* (Course Instructor: Dr. K. V. Srivastava)
- *Dielectric Slab Waveguide* (Course Instructor: Dr. M. J. Akhtar)
- *Narrow Linewidth Laser* (Course Instructor: Dr. R. Vijaya)
- *MEMS Based Varactor Diode* (Course Instructor: Dr. B. Ghosh)

M.TECH THESIS (2007-8)

Topic: ***Performance, Analysis and Implementation of Analog Broadband Link for GMRT***

Supervisors: Dr. Ashik Paul, Department of Radio Physics & Electronics, University of Calcutta & Mr. S. Sureshkumar, Giant Meterwave Radio telescope (GMRT), Pune

M.TECH SEMINAR (2007-8)

Topic: ***Popularity of RFID in Modern Technology***

Supervisors: Dr. Nikhil Ranjan Das, Department of Radio Physics & Electronics, University of Calcutta

M.TECH PROJECTS (2006-7)

1. Topic: ***A Scale-Model Hardware And Software Characterization of a Microwave Photonic Transmitter***
   Supervisor: Prof. Subal Kar, Department of Radio Physics & Electronics, University of Calcutta
2. Topic: ***Hardware And Software Characterization of PRBS Generation & IR Transmission & Reception***
   Supervisor: Dr. Nikhil Ranjan Das, Department of Radio Physics & Electronics, University of Calcutta

B.TECH PROJECT (2005-6)

Topic: ***Software Simulation And scale-model Hardware Characterization of an optical heterodyning scheme***

Supervisors: Prof. Subal Kar, Department of Radio Physics & Electronics, University of Calcutta

INTERNSHIP (2005)

Topic: ***Measurement of Polarization Characteristics of a Planar Log-Periodic Antenna with an Innovative Step-lane Reflector***

Program: Student Training Program, Giant Meterwave Radio telescope (GMRT), Pune (October 2005)

Supervisor: Dr. Shubhendu Joardar

REVIEWER

1. IEEE Photonics Journal
2. IEEE Photonics Technology Letters
3. IEEE Journal of Lightwave Technology
4. IEEE Antennas and Wireless Propagation Letters
5. IEEE Transactions on Microwave Theory & Techniques
6. IEEE Microwave and Wireless Technology Letters
7. IEEE Transactions on Antennas & Wave Propagation
8. IEEE Transactions on Electromagnetic Compatibility
9. IEEE Letters on Electromagnetic Compatibility Practice and Applications

10. IEEE Transactions on Components, Packaging and Manufacturing Technology
11. IEEE Transactions on Circuits and Systems II
12. IEEE Transactions on Nanotechnology
13. IEEE Transactions on Nanobioscience
14. IEEE Transactions on Wireless Communications
15. IEEE Sensors Journal
16. IEEE Sensors Letters
17. IEEE Journal of Quantum Electronics
18. IEEE Journal of Selected Topics in Quantum Electronics
19. IEEE Transactions on Plasma Science
20. IEEE Transactions on Terahertz Science and Technology
21. IEEE Internet of Things Journal
22. IEEE Open Journal of Antenna and Propagation
23. IEEE Open Journal of Instrumentation and Measurement
24. IET Microwaves, Antennas and Propagation
25. IET Electronics Letters
26. Journal of Applied Physics
27. Nature Scientific Reports
28. Journal of the Optical Society of America B
29. AIP Advances
30. Applied Optics
31. Optics Letters
32. Optics Express
33. Chinese Optics Letters
34. Optics Materials Express
35. Springer Applied Physics A: Materials Science & Processing
36. Springer: Journal of Electronic Materials
37. Springer Journal of Material Science: Materials in Electronics
38. Springer Optical and Quantum Electronics
39. Springer Plasmonics
40. Springer Sadhana
41. Springer Plos One
42. International Journal of Microwave and Wireless Technology
43. ACS Photonics
44. Nanoscale Advances
45. Journal of Materials Chemistry A
46. Wiley Advanced Science
47. Wiley International Journal of RF and Microwave Computer-aided Engineering
48. Wiley Microwave and Optical Technology Letters
49. Wiley International Journal of Circuit Theory and Applications
50. Wiley Laser & Photonics Reviews

51. Wiley International Journal of Communications Systems
52. Radio Science
53. Elsevier Materials and Design
54. Elsevier Optics Communication
55. Elsevier Carbon
56. Elsevier International Journal of Electronics & Communication
57. Elsevier AEU International Journal of Electronics and Communications
58. Elsevier Physica E: Low Dimensional Systems and Nanostructures
59. Elsevier Physica B: Physics of Condensed Matter
60. Elsevier Journal of Alloys and Compounds
61. Elsevier Journal of Magnetism and Magnetic Materials
62. Elsevier Materials Today Communications
63. Elsevier Results in Physics
64. Elsevier Current Applied Physics
65. Elsevier Optik
66. Elsevier Infrared Physics and Technology
67. Elsevier Physics Letters A
68. Elsevier Nano Communication Networks
69. Elsevier Chinese Journal of Physics
70. Elsevier Superlattice and Microstructures
71. Elsevier Optics and Lasers in Engineering
72. Elsevier Diamond & Related Materials
73. Elsevier Wave Motion
74. IOP Journal of Physics Communications
75. IOP Journal of Optics
76. IOP Applied Physics Express
77. IOP Euro Physical Letters
78. IOP New Journal of Physics
79. International Journal of Microwave and Wireless Technologies
80. Turkish Journal of Electrical Engineering & Computer Sciences
81. Applied Computational Electromagnetic Society (ACES) Journal
82. Taylor & Francis: Journal of Electromagnetic Waves and Applications
83. Taylor & Francis: Waves in Random and Complex Media
84. Taylor & Francis: IETE Journal of Research
85. Taylor & Francis: IETE Technical Review
86. Taylor & Francis: Spectroscopy Letters
87. Taylor & Francis: International Journal for Sustainable Engineering
88. Frequenz
89. Progress In Electromagnetic Research
90. Science China Technological Sciences
91. Transactions of Nanjing University of Aeronautics and Astronautics

92. Advances in Condensed Matter Physics, Hindawi
93. Journal of Nanomaterials, Hindawi
94. International Journal of Antennas and Propagation, Hindawi
95. Optoelectronics and Advanced Materials – Rapid Communications (OAM-RC)
96. Bentham Recent Patents on Engineering
97. Frontiers in Physics

COMMITTEE MEMBERSHIP

- Member, Editorial Board, International Journal of Advances in Microwave Techniques (IJAMT)
- Technical Program Committee Member, Recent Research Trends in Electronics and Communication Engineering, IIT BHU, Varanasi, 3-5 March, 2017.
- Track Chair, 2nd IEEE International Conference on Control, Computing, Communication & Materials, United College of Engineering, Allahabad, 21-22 October, 2016.
- Technical Program Committee Member, International Conference on Computational Science and Engineering, RCC Institute of Information Technology, Kolkata, 4-6 October, 2016.
- Member, Track Chair, 4th IEEE Uttar Pradesh Section International Conference 2017 (UPCON 2017), Mathura, 26-28 October, 2017.
- Technical Program Committee Member, IEEE International conference on Antenna Innovations and Modern Technologies (iAiM 2017), Bangalore, 24-26 November, 2017.
- Paper Review Committee Member, 11th International Conference on Antenna Test & Measurement Society 2018 (ATMS 2018), Pune, 5-7 February, 2018.
- Publicity Committee Member, IEEE International Microwave & RF Conference (IMaRC), Kolkata, 28-30 November, 2018.
- Workshop and Special Session Member, IEEE-INAE Workshop on Electromagnetics (IIWE) 2018, Trivandrum, 6-8 December, 2018.
- Technical Paper Review Committee Member, 2018 IEEE Indian Conference on Antennas & Propagation (InCAP), Hyderabad, 16-19 December, 2018.
- Local Organizing Committee Member, URSI 2019 Asia Pacific Radio Science Conference (AP-RASC), New Delhi, 9-15 March, 2019.
- Session Convener, Commission B, URSI 2019 Asia Pacific Radio Science Conference (AP-RASC), New Delhi, 9-15 March, 2019.
- Paper Review Committee Member, 12th International Conference on Antenna Test & Measurement Society 2019 (ATMS 2019), Chennai, 25-27 July, 2019.
- Track Chair, Special Session on "Recent Advances on Materials and metasurface based Devices and Antennas for High Frequency Applications," IEEE Region-10 Conference (TENCON), Kochi, 17-20 October, 2019.
- Chair for Student Program, IEEE International Microwave & RF Conference (IMaRC), Mumbai, 13-15 December, 2019.
- Publicity Chair, CODEC 7th International Conference on Computers and Devices for Communication (CODEC), Kolkata, 19-20 December, 2019.
- Convener, 2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020), Varanasi, 12-14 February, 2020.
- Publicity and Publication Committee Member, 2020 IEEE Indian Conference on Antennas & Propagation (InCAP), Kolkata, 17-20 December, 2020.
- Co-ordinator, IEEE Region 10 Microwave Theory & Techniques Society (MTT-S) Young Professional (YP) Committee, 2021-23.
- Workshop and Tutorial Committee Member, 2021 IEEE Indian Conference on Antennas & Propagation (InCAP), Jaipur, 13-16 December, 2021.

- Member, Technical Committee, MTT-4 Microwave Passive Components and Transmission Line Structures Committee (TC-4), IEEE MTT Society since 2021.
- Member, Technical Program Committee, International Conference on Technology, Research, and Innovation for BEtterment of Society (TRIBES 2021), IIIT Naya Raipur, 17-19 December, 2021.
- Member, Technical Program Committee, XLV Symposium of the Optical Society of India Conference on Optics, Photonics & Quantum Optics (COPaQ 2022), IIT Roorkee, 10-13 November, 2022.
- Co-chair, Young Professional Activities, IEEE Microwave, Antennas, and Propagation Conference (MAPCON), Bangalore, 12-16 December, 2022.
- Conference Co-chair, 1st IEEE International Conference on Microwave, Antenna and Communication (MAC 2023), MNNIT Allahabad, Prayagraj, 24-26 March, 2023.
- Member, Editorial Board, The Journal of Korean Institute of Communications and Information Sciences (J-KICS).
- Sponsor/ Exhibits Chair, Sixth IEEE International Workshop on Recent Advances in Photonics (WRAP 2023), IIIT Allahabad, Prayagraj, 7-9 December, 2023.
- Co-Chair, Young Professional Activities, IEEE Microwave, Antennas, and Propagation Conference (MAPCON), Ahmedabad, 10-14 December, 2023.
- Member, Technical Program Committee, International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023), Cochin University of Science and Technology, Kochi, 11-13 December, 2023.
- Member, Publicity Committee, CODEC 8th International Conference on Computers and Devices for Communication (CODEC), Kolkata, 14-16 December, 2023.
- Member, Executive Committee, 3rd Wireless, Antenna & Microwave Symposium (WAMS) 2024, Vishakhapatnam, 29 February – 3 March, 2024.

PROFESSIONAL MEMBERSHIP

- IEEE Professional Membership (Since 2016; Senior Member since 2020)
- Individual Member, International Union of Radio Sciences (URSI) (Since September, 2017)
- Indian Radio Science Society (InRaSS) Professional Membership
- IEEE Student Member (2006-2015)
- Secretary: IEEE Student Branch Chapter, University of Calcutta (2007-8)
- Member, Optical Society of America (OSA) (Since 2020)
- Member, International Society for Optics and Photonics (SPIE) (Since 2020)
- Fellow Member, IETE
- Associate Fellow Member, West Bengal Academy of Science and Technology (WAST) (Since 2020)
- Life Fellow Member, The Optical Society of India
- Member, Antenna Measurement Techniques Association (AMTA) (Since 2024)
- Life Senior Member, Wireless, Antenna and Microwave Symposium (WAMS) Society (Since 2024)

INVITED TALKS

- Faculty Development Program on "High Frequency Application of Nanoelectronic and Photonic Devices" at RCC Institute of Technology, Kolkata on 13th July, 2016.
- Department of Electrical Engineering, University of Cambridge on 3rd October, 2016.
- IEEE Computer Society India Symposium at Bodhgaya on 17th March, 2018.
- Workshop on Electromagnetics & Antenna Design, Department of Electronics Engineering, IIT (BHU) Varanasi on 28th May, 2018.
- CSIR-Central Electronics Engineering Research Institute Pilani on 8th October, 2018.

- QIP Short Term Course on "Smart Sensors and Systems" in Department of Electronics Engineering, IIT (BHU) Varanasi on 27th October, 2018.
- Faculty Development Program on "Metasurfaces: Theory, Design and Application" in Department of Electronics Engineering, NIT Patna on 21st December, 2018.
- India-UK Second International Conference on "Advanced Nanomaterials for Energy, Environment and Healthcare Applications" in Bishop Heber College, Trichy on 4th February, 2019.
- TEQIP Phase III Short Term Course on "Engineered Materials for Future Electromagnetic Research and Antenna Applications" in Department of Electronics and Telecommunication Engineering, Jadavpur University, Kolkata on 7th February, 2019.
- IEEE Antenna Propagation and Microwave Theory & Techniques Society (AP-MTT-S) Student Branch Chapter (SBC) in Department of Electronics & Electrical Communication Engineering, IIT Kharagpur on 8th February, 2019.
- Indian Institute of Space Science & Technology (IIST), Trivandrum on 20th May, 2019.
- IEEE Antenna Propagation Society (AP-S) Kerala Chapter in association with IEEE Student Branch of Government Engineering College, Kerala in Department of Electronics & Communication Engineering, Government Engineering College, Barton Hill Trivandrum on 20th May, 2019.
- Pre-conference tutorial on TEQIP-III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW-2019), NIT Trichy on 21st May, 2019.
- TEQIP-III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW-2019), NIT Trichy on 23rd May, 2019.
- QIP Short Term Course on "Microwave/ Millimeter Wave Devices and Their Applications" in Department of Electronics Engineering, IIT (BHU) Varanasi on 26th September, 2019.
- QIP Short Term Course on "Recent Trends in Microwave/Millimeter Wave Technology and their Applications in Wireless Communication and Defense Perspective" in Department of Electronics Engineering, IIT (BHU) Varanasi on 16th October & 17th October, 2019.
- IEEE Kerala Section sponsored 2019 IEEE Geoscience and Remote Sensing Conference (TENGARSS), Kochi on 19th October, 2019.
- IEEE Antenna Propagation Society (AP-S) Student Branch Chapter of University of Calcutta in Department of Radio Physics & Electronics, University of Calcutta on 24th December, 2019.
- IEEE Antenna Propagation Society (AP-S) Student Branch Chapter of IIEST Shibpur in Department of Electronics and Telecommunication Engineering on 12th March, 2020.
- University of Engineering & Management (UEM) in Department of Electronics & Communication Engineering on 13th March, 2020.
- Swami Vivekananda Institute of Technology (SVIST) in Department of Electronics & Communication Engineering on 6 June, 2020. (Webinar)
- IEEE Microwave Theory & Techniques Society (MTT-S) Student Branch Chapter and IEEE Antenna Propagation Society (AP-S) Student Branch Chapter of Department of Electronics and Communication Engineering, Manipal Univeristy Jaipur Campus on 25 June, 2020. (Webinar)
- Workshop entitled, "National Workshop on Advance Antenna Technology 2020" in Department of Electronics and Communication Engineering, Indian Institute of Information Technology Allahabad on 14 July, 2020. (Webinar)
- Pailan Technological Campus on 21 July, 2020. (Webinar)
- Workshop on "Recent trends and research scope in Antenna Domain" in Department of Electronics and Communication Engineering, Vignan's Institute of Information Technology, Visakhapatnam, Andhra Pradesh on 30 July, 2020. (Webinar)
- International Workshop on "Metamaterials and its applications" in IEEE Antennas and Propagation Society Chapter Jaipur in association with IEEE Rajasthan Subsection, Department of Electronics and Communication Engineering, Malaviya National Institute of Technology, Jaipur and Department of Electronics and Communication Engineering, Government Women Engineering College, Jaipur on 31 July, 2020. (Webinar)

- AICTE-sponsored Short Term Training Program on "Antenna Design and Analysis using Mathematical Solvers" in Department of Electronics and Communication Engineering, Aditya Institute of Technology And Management, Srikakulam, Andhra Pradesh on 8 September, 2020. (Webinar)
- AICTE Training and Learning (ATAL) sponsored Online One week Faculty Development Program on "Recent Trends and Advances in IoT" in Department of Electronics and Communication Engineering, Dr. Shyama Prasad Mukherjee International Institute of Information Technology, Naya Raipur on 3 October, 2020. (Webinar)
- Indian Institute of Technology Palakkad and IEEE Antennas and Propagation Society (APS) Kerala Chapter on 11 October, 2020. (Webinar)
- "Front-end Communication" by Department of Instrumentation and USIC, Gauhati University on 1 December, 2020. (Webinar)
- "Emerging Trends in Antenna Design" (ETAD-20) by Yeshwantrao Chavan College of Engineering, Nagpur on 24 December, 2020. (Webinar)
- "Webinar Series: Advancement in Signal Processing and Communication for futuristic application/product" by Sikkim Manipal Institute of Technology (SMIT) in association with IEEE Student branch, SMIT on 7 February, 2021. (Webinar)
- The 13th Annual International Conference Antenna Test and Measurement Society (ATMS) 2021 Virtual Conference on 20 February, 2021. (Webinar)
- QIP Short Term Course on "Advanced Materials Characterizations: From fundamentals toward applications" in Department of Ceramic Engineering, IIT (BHU) Varanasi on 22 February, 2021. (Webinar)
- TEQIP-III Sponsored one-week workshop on "Modern Wireless Communication Systems and Antenna Engineering with Experimental Learning" in NIT Sikkim, 15-21 March, 2021. (Webinar)
- IEEE Bombay Section Microwave Theory & Techniques Society on 15 April, 2021. (Webinar)
- Nagarjuna College of Engineering and Technology on 31 May, 2021. (Webinar)
- Midnapore City College on 28 July, 2021. (Webinar)
- QIP Short Term Course on "Architecture and Technologies for 5G and Beyond Wireless Networks" in Department of Electronics Engineering, IIT (BHU) Varanasi on 16 August, 2021. (Webinar)
- AICTE Training and Learning (ATAL) sponsored Online One week Faculty Development Program on "Sensors Technology" in University Institute of Engineering & Technology (UIET), Kurukshetra University on 9 September, 2021. (Webinar)
- IEEE Student Branch IIIT Design and Manufacturing, Jabalpur on 10 September, 2021. (Webinar)
- Technical Lecture Series organized by IEEE Amity University Uttar Pradesh Lucknow Campus Student Branch Chapter and IEEE Young Professionals Committee UP Section on 19 September, 2021. (Webinar)
- "Recent Trends in Engineering and Technology" organized by Swami Vivekananda Institute of Technology (SVIST), Kolkata on 17 November, 2021. (Webinar, ***Keynote Speaker***)
- "2nd Industrial Electronics, Mechatronics, Electrical and Mechanical Power (IEMPOWER 2021)" organized by Institute of Engineering and Management, Kolkata on 27 November, 2021. (Webinar, ***Plenary Talk***)
- Short Term Training Program on "Recent Trends in Microwave and Wireless Technologies" organized by Department of Electronics and Telecommunication Engineering of the Ramrao Adik Institute of Technology (RAIT), Dr. D. Y. Patil Deemed to be University, Navi Mumbai on 8 December, 2021. (Webinar)
- Short Term course on "Recent Trends and Applications of RF and Microwave Engineering" organized by Department of Electronics and Communication Engineering, IIIT Bhagalpur on 9 December, 2021. (Webinar)
- National Education Day on "Communication as Interdisciplinary Tool" organized by Swami Vivekananda Institute of Technology (SVIST), Kolkata on 22 December, 2021.
- 5th Workshop on Optics and Photonics: Theory and Computational Techniques (OPTCT) organized by IIT Delhi on 27 December, 2021. (Webinar)

- "Advances in Communication" organized by Department of Electronics & Communication Engineering, Kalyani Govt. Engineering College and IEEE KGEC Student Branch Chapter on 3 January, 2022. (Webinar)
- Asansol Engineering College on 25 February, 2022. (Webinar)
- "AICTE QIP Short Term Course titled Electromagnetics: Recent Trends and Future Applications" organized by IIT Indore on 1 March, 2022. (Webinar)
- IEEE IEM Antenna and Propagation Society (AP-S) Student Branch Chapter in Department of Electronics and Communication Engineering on 15th March, 2022.
- Annant Gyan Knowledge and Skills Private Limited on 27th March, 2022. (Webinar)
- "Microwave and beyond: Present and Futuristic Wireless Communication Systems" organized by Electronics and Telecommunication Engineering Department, Kalimpong Government Polytechnic on 5th April, 2022. (Webinar)
- Heritage Institute of Technology, Kolkata on 4th May, 2022.
- Online workshop on "Advances in Photonic Devices, Sensors, and Systems" organized by NIT Delhi and MNNIT Allahabad on 2nd June, 2022. (Webinar)
- IEEE Microwave Theory & Technology Society (MTT-S) Student Branch Chapter IIT Delhi and IEEE MTT-S IIT Delhi Chapter on 18th July, 2022. (IEEE MTT-S Speakers Bureau Program)
- IEEE Microwave Theory & Technology Society (MTT-S) Student Branch Chapter IIT Roorkee, Department of Electronics & Communication Engineering on 20th July, 2022. (IEEE MTT-S Speakers Bureau Program)
- Department of Electronics Science, University of Delhi Science Campus on 22nd July, 2022.
- Online Industry Academia joint FDP Program on "Recent Innovation in Antennas and RF Frontend Systems for 5G" organized by Dept. of ECE, CBIT (A), Hyderabad and ARK Infosolutions Pvt. Ltd on 28th July, 2022. (Webinar)
- IETE Varanasi Sub-centre on 28th October, 2022.
- IIT Indore, URSI Regional Conference on Radio Science (RCRS 2022) dated 2nd December, 2022.
- Nagarjuna College of Engineering and Technology on 17th December, 2022.
- Monthly Lecture Series, Antenna Test & Measurement Society (ATMS) on 17th December, 2022. (Webinar)
- 6th Workshop on Optics and Photonics: Theory and Computational Techniques (OPTCT) organized by IIT Delhi on 26 December, 2022.
- IEEE UP Section on 9th January, 2023. (Webinar)
- AICTE Training and Learning (ATAL) sponsored Online Two weeks Faculty Development Program on "Soft Computing approach Towards Microwave Application" in Department of Electronics & Communication Engineering, Indian Institute of Information Technology Bhagalpur on 14 January, 2023. (Webinar)
- One week Training Program on "Research Instruments for Emerging Materials and Technology" in Sophisticated Analytical & Technical Help Institute (SATHI), Banaras Hindu University, Varanasi organized by Department of Physics, Institute of Science, Banaras Hindu University in association with Banasthali Vidyapith Rajasthan on 28th January, 2023.
- One week Faculty Development Program entitled, "Recent Trends in High Frequency Communications (RHFC-2023)" organized by Annant Gyan Knowledge and Skills Private Limited during 20-24 February, 2023. (Webinar)
- "International Workshop on Advances in Planner Antennas and Communication Technology" organized by Dept. of Electronics and Communication Engineering, School of Engineering and Technology, Mizoram University, Aizawl on 13th March, 2023. (Webinar)
- One week SERB Karyashala "Futuristic Trends in Microwave and Millimeter Wave Technologies: An ML Approach" organized by Dept. of Electronics and Communication Engineering, National Institute of Technology, Silchar on 5th June, 2023. (Webinar)
- IEEE AP/MTT Joint Chapter, Gujarat Section, Ahmedabad, 8th June, 2023. (IEEE MTT-S Speakers Bureau Program)

- Young Professional Talk, Wireless, Antenna and Microwave Symposium (WAMS), Pandit Deendayal Energy University in Gandhinagar, Gujarat, India on 9th June, 2023.
- Department of Electronics & Communication Engineering, National Institute of Technology Durgapur, India on 12th June, 2023.
- IEEE AP-MTT-S Student Branch Chapter, IEEE Kharagpur Section, India on 13th June, 2023. (IEEE MTT-S Speakers Bureau Program)
- IEEE AP-MTT-S Joint Chapter of Kolkata Section in association with IEEE MTT-S Student Branch Chapter of Jadavpur University, India on 22nd June, 2023. (IEEE MTT-S Speakers Bureau Program)
- Department of Electronics and Telecommunication Engineering, Symbiosis Institute of Technology, Pune on 10th July, 2023.
- Department of Electronics and Telecommunication Engineering, IEEE MTT-S Student Branch Chapter, Amrutvahini College of Engineering, Sangamner in association with IEEE MTT-S Bombay Section on 11th July, 2023. (IEEE MTT-S Speakers Bureau Program)
- Giant Metrewave Radio Telescope (GMRT), Khodad, Pune on 11th July, 2023.
- IEEE MTT-S Student Branch Chapter, Don Bosco Institute of Technology on 13th July, 2023. (IEEE MTT-S Speakers Bureau Program)
- IETE Navi-Mumbai & ISF-RAIT at D. Y. Patil deemed to be University, Ramrao Adik Institute of Technology on 13th July, 2023.
- One week SERB Karyashala "Modern Antennas and Metasurfaces for Microwave, Millimeter-wave and Terahertz-wave Communication Technologies" organized by Dept. of Electronics and Communication Engineering, National Institute of Technology, Jamshedpur on 29th July, 2023. (Webinar)
- XXXVth URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023) organized by URSI in Sapporo, Japan on 25th August, 2023. (Two invited talks)
- Five-day High-end Workshop on "Advanced Techniques for Emerging Microwave, Millimeter-Wave, and Terahertz Devices" sponsored by IEEE MTT-S Student Branch Chapter, NIT Patna and organized by Department of Electronics & Communication Engineering, NIT Patna on 14th October, 2023. (Webinar)
- Department of Physics, IIT (BHU), Varanasi organized by SPIE Student Branch Chapter on 17th October, 2023.
- Department of ECE in association with IEEE Student Branch JIIT Noida and IEEE Young Professionals UP Section on 26th October, 2023. (Webinar)
- IEEE Antennas and Propagation Society (IEEE AP-S) Student Branch Chapter (SBC) at Indian Institute of Technology (IIT) Indore, in collaboration with IEEE Student Branch Chapter at IIT Indore and IEEE Madhya Pradesh Section AP-S Chapter on 31st October, 2023.
- Sixth IEEE International Workshop on Recent Advances in Photonics (WRAP 2023) organized by IEEE Photonics Society UP Section at IIIT Allahabad, Prayagraj on 8th December, 2023.
- 8th International Conference on Computers and Devices for Communications (CODEC 2023) organized by Institute of Radio Physics & Electronics at Ramakrishna Mission Institute of Culture, Kolkata on 15th December, 2023. (IEEE MTT-S Speakers Bureau Program)
- Young Professional Talk, IEEE Photonics Society Kolkata Chapter and IEEE Photonics Society CUSB Chapter at Institute of Radio Physics & Electronics, University of Calcutta on 19th December, 2023. (IEEE MTT-S Speakers Bureau Program)
- One-day seminar organized by NDLI Local Chapter of RCCIIT along with Institution's Innovation Council of RCC Institute of Information Technology (RCCIIT) at RCCIIT Kolkata on 21st December, 2023.
- TCS Research, IIT Kharagpur Research Park Kolkata on 22nd December, 2023. (IEEE MTT-S Speakers Bureau Program)
- One week Faculty Development Programme on "Recent Trends in High Frequency Communication and Next Generation Smart Systems" organized by Department of Electronics & Communication Engineering, Institute of Engineering & Management, Kolkata Saltlake Campus & IEM-IEDC (ECE) at IEM, Kolkata on 1st February, 2024.

- IEEE MTT-S HITK Student Branch Chapter in association with IEEE AP-MTT Kolkata Chapter at Heritage Institute of Technology, Kolkata on 2nd February, 2024. (IEEE MTT-S Speakers Bureau Program)

SESSION CHAIRING

- IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting, Boston, USA, 8-13 July, 2018.
- International Microwave and RF Conference (IMaRC 2018), Kolkata, India, 28-30 November, 2018.
- IEEE-INAE Workshop on Electromagnetics (IIWE 2018), Trivandrum, India, 6-8 December, 2018.
- URSI Asia Pacific Radio Science Conference (AP-RASC 2019), New Delhi, India, 9-15 March, 2019.
- International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW-2019), Trichy, India, 22-24 May, 2019.
- IEEE Region-10 Conference (TENCON), Kochi, India, 17-20 October, 2019.
- 2019 IEEE Geoscience and Remote Sensing Conference (TENGARSS), Kochi, India, 18-20 October, 2019.
- International Microwave and RF Conference (IMaRC 2019), Mumbai, India, 13-15 December, 2019.
- The 13th Annual International Conference Antenna Test and Measurement Society (ATMS) 2021 Virtual Conference, 18-20 February, 2021.
- URSI General Assembly 2021 (URSI GASS 2021), Hybrid mode, Rome, Italy, 28 August - 4 September, 2021.
- 2021 Indian Conference on Antennas and Propagation (InCAP 2021), Virtual mode, Jaipur, India, 13-16 December, 2021.
- International Microwave and RF Conference (IMaRC 2021), Hybrid mode, Kanpur, India, 17-19 December, 2021.
- International Conference on Technology, Research, and Innovation for BEtterment of Society (TRIBES 2021), Virtual mode, Raipur, India, 17-19 December, 2021.
- XLV Symposium of Optical Society of India Conference on Optics, Photonics and Quantum Optics (COPaQ 2022), IIT Roorkee, India, 10-13 November, 2022.
- URSI Regional Conference on Radio Science (URSI-RCRS 2022), IIT Indore, 1-4 December, 2022.
- Microwave, Antennas, and Propagation Conference (MAPCON), Bengaluru, India, 12-15 December, 2022.
- 2nd Wireless, Antenna and Microwave Symposium (WAMS) 2023, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India, 7-10 June, 2023.
- XXXVth URSI General Assembly and Scientific Symposium (URSI GASS) 2023, Sapporo Convention Centre, Sapporo, Japan, 19-26 August, 2023.
- 3rd IEEE Wireless, Antenna and Microwave Symposium (WAMS) 2024, Raghu Engineering College (A), Visakhapatnam, Andhra Pradesh, India, 29 February – 3 March, 2024.

ADMINISTRATIVE PROFICIENCY

1. Served as **Mess Secretary** in ***Hall of Residence VII in IIT Kanpur*** during 2012-13.
2. Served as **Convenor, Anti Food Wastage Committee** in ***Hall of Residence VII in IIT Kanpur*** during 2012-13.
3. Served as **Convenor, Dues Checking Committee** in ***Hall of Residence VII in IIT Kanpur*** during 2012-13.
4. Served as **Volunteer, Euphoria-2013** (Hall Day Celebration), ***Hall of Residence VII in IIT Kanpur***.
5. Served as **Member, Departmental Purchase Committee**, Department of Electronics & Communication Engineering, ***IIIT Allahabad*** during 2016-17.
6. Serving as **Faculty Advisor, IEEE Microwave Theory & Techniques Society Student Branch Chapter**, ***IIT (BHU)*** (Since the foundation, 2017).
7. Served as **Member, Departmental Post Graduate Committee**, Department of Electronics Engineering,

IIT (BHU) during 2017-19 and 2020-22.

8. Served as **Member, Departmental Library Committee**, Department of Electronics Engineering, ***IIT (BHU)***.
9. Served as **Convener, Departmental Time Table Committee**, Department of Electronics Engineering, ***IIT (BHU)***, 2018-2020.
10. Serving as **Member, Departmental R & D Committee**, Department of Electronics Engineering, ***IIT (BHU)***.
11. Served as **Member & Secretary, Finance Committee**, Centenary Celebration Committee, ***IIT (BHU)*** during 2018-19.
12. Served as **Co-ordinator, Web Committee**, Department of Electronics Engineering, ***IIT (BHU)*** during 2018-22.
13. Serving as **Vice President, Electronics Engineering Society**, Department of Electronics Engineering, ***IIT (BHU)***.
14. Served as **Member, Departmental Purchase Committee**, Department of Electronics Engineering, ***IIT (BHU)*** during 2018-20.
15. Served as **Member, Departmental Under Graduate Committee**, Department of Electronics Engineering, ***IIT (BHU)*** during 2019-21.
16. Served as **Convener, Departmental Under Graduate Committee**, Department of Electronics Engineering, ***IIT (BHU)*** during 1 September, 2022-8 September, 2023.
17. Served as **Executive Committee Member,** ***IETE Varanasi sub-centre*** (2020-2022).
18. Serving as **Member, Institute Website**, ***IIT (BHU)***.
19. Serving as **Member, Institute Core Course Monitoring Committee**, ***IIT (BHU)***.
20. Serving as **Executive Committee Member,** ***IEEE UP Section Photonics Society*** (2021-till date).
21. Serving as **Vice Chairman,** ***IETE Varanasi sub-centre*** (2022-till date).
22. Serving as **Member, Board of Studies, Department of Electronics and Telecommunication Engineering,** ***Vidyalankar Institute of Technology, Mumbai*** (2022-till date).
23. Serving as **Secretary,** ***IEEE UP Section Antennas & Propagation Society*** (2023-24).
24. Served as **Member,** ***IEEE UP Section Young Professional Group*** (2023-24).
25. Serving as **Vice Chairman,** ***IEEE Sensor Council, UP Section*** (2023-24).
26. Serving as **Member, Executive Committee,** ***Wireless, Antenna & Microwave Symposium Society (WAMS)*** (2023-25).
27. Serving as **Chair, Electronic Communication & Information Management Activities,** ***IEEE UP Section*** (2024-25).

CONFERENCES, WORKSHOPS & SCHOOLS ATTENDED

a) Conferences attended:

- "**National Seminar on Nuclear Physics**" held on 31st December, 2001 at Scottish Church College organized by ***Scottish Church College, Kolkata & Indian Physics Association*** (Calcutta Chapter).
- "**National Seminar on Current Trends in Research at the Cross-roads of Physics, Chemistry and Biology**" held on 20th December, 2003 at ***Scottish Church College, Kolkata-700006***.
- **CALCON'05** organized by ***IEEE Calcutta Section*** during 2nd-3rd December, 2005 held at The Peerless Inn, Kolkata.
- "**Nanotechnology: An awareness Programme**" organized by ***UCT-CU, under TEQIP*** during 24th-25th March, 2006 held at Meghnad Saha Auditorium, University of Calcutta.
- "**WieNSET-2007**" organized by ***WIE-IEEE in collaboration with WBUT & IEEE Calcutta Sectio***n on 29th-30th June, 2007.
- "**VDAT 2007**" organized by ***VLSI Society of India*** on 8th -11th August, 2007.
- "**CASCOM'07: Tutorial/Students Professional Awareness Conference (SPAC)**" organized by ***IEEE Communications Society (COMSOC) & IEEE Circuits And Systems Society (CASS), IEEE Calcutta Section*** on 24th November, 2007 held at Indian Institute of Chemical Engineers Auditorium, Jadavpur University Campus, Kolkata.

- "**Microwave Multiplexed Lightwave System: A Flavour of Microwave Photonics**" organized by Academy of Technology & sponsored by ***IEEE Calcutta Section and its ED and AP-MTT Chapters*** on 12th January, 2008 at Academy of Technology, Aedconagar, Hooghly., West Bengal.
- "**National Conference on Engineering Education (NCEE-2008)**" organized by ***Academy of Technology, Hooghly***, West Bengal during 9th-10th February, 2008.
- "**Some Issues of Nano Electronics and Photonics**" organized by ***Department of Electronic Science, University of Calcutta*** on 26th March, 2008 held at the N.R.Sen Auditorium, University College of Science and Technology, University of Calcutta.
- "**Wireless Communication and Networking (WCN 2008)**" Sponsored by Technical Education Quality Improvement Program (TEQIP) held in the ***Department of Electronics and Communication Engineering, National Institute of Technology, Durgapur*** during 28th-29th March, 2008.
- "**Student Paper and Design Model Contest (EDCC-08)**" organized by ***IEEE WIE Affinity Group, Calcutta Section & IEEE Calcutta University Student Branch*** on 20th June, 2008.
- "**Fifth Annual Conference, ATMS - 2012**" organized by ***Antenna Test & Measurement Society India*** held at Hotel Orchid, Mumbai on 2nd & 3rd February, 2012.
- "**Progress In Electromagnetics Research Symposium (PIERS)**" organized by The ***Electromagnetics Academy in Kuala Lumpur, Malaysia*** during 27-30 March, 2012.
- "**IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting**" organized by ***IEEE in Chicago, USA*** during 8-13 July, 2012.
- "**2013 International Symposium on Electromagnetic Theory (EMTS 2013)**" organized by ***International Union of Radio Science (URSI) Commission B in Hiroshima, Japan*** during 20-24 May, 2013.
- "**IEEE Applied Electromagnetics Conference (AEMC 2013)**" organized by ***IEEE AP-MTT Chapter, Kolkata Section*** in KIIT University, Bhubaneswar during 18-20 December, 2013.
- "**20th National Conference on Communications (NCC 2014)**" organized by ***Department of Electrical Engineering, IIT Kanpur & BSNL-IITK Telecom Center of Excellence at IIT Kanpur*** during 28th February –2nd March, 2014.
- "**2014 Asia-Pacific Microwave Conference (APMC 2014)**" organized by ***IEEE held at Sendai International Center, Sendai, Japan*** during 4-7 November, 2014.
- "**International Microwave and RF Conference (IMaRC 2014)**" organized by ***Indian Institute of Sciences, Bangalore held at Hotel Vivanta by Taj, Yesvantpur, Bangalore, India*** during 15-17 December, 2014.
- "**European Conference on Antennas and Propagation (EuCAP 2015)**" organized by ***IEEE held at Lisbon, Portugal*** during 12-17 April, 2015.
- "**2016 URSI Asia-Pacific Radio Science Conference (URSI AP-RASC 2016)**" organized by ***URSI held at Seoul, South Korea*** during 21-25 August, 2016.
- "**European Microwave Week 2016 (EuMW 2016)**" organized by ***IEEE held at London, UK*** during 3-7 October, 2016.
- "**2017 International Symposium on Antennas and Propagation (ISAP 2017)**" organized by ***IEEE held at Phuket, Thailand*** during 30 October-2 November, 2017.
- "**Applied Electromagnetics Conference 2017 (AEMC 2017)**" organized by ***Maharashtra Institute of Technology, Aurangabad and IEEE AP/MTT Chapter Kolkata Section, IEEE Bombay Section, PIET, Nagpur held at Aurangabad*** during 19-22 December, 2017.
- "**Eleventh Annual Conference, ATMS - 2018**" organized by ***Antenna Test & Measurement Society India*** held at Novotel, Pune during 5-7 February, 2018.
- "**IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting**" organized by ***IEEE in Boston, USA*** during 8-13 July, 2018.
- "**International Microwave and RF Conference (IMaRC 2018)**" organized by ***IEEE in Kolkata*** during 28-30 November, 2018.
- "**2019 URSI Asia-Pacific Radio Science Conference (URSI AP-RASC 2019)**" organized by ***URSI in New Delhi*** during 9-15 March, 2019.

- "**International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW-2019)**" organized by ***IEEE in NIT Trichy*** during 22-24 May, 2019.
- "**IEEE Region 10 Conference (TENCON 2019)**" organized by ***IEEE in Kochi*** during 17-20 October, 2019.
- "**2019 IEEE Geoscience and Remote Sensing Conference (TENGARSS)**" organized by ***IEEE in Kochi*** during 18-20 October, 2019.
- "**International Microwave and RF Conference (IMaRC 2019)**" organized by ***IEEE in Mumbai*** during 13-15 December, 2019.
- "**CODEC 7th International Conference on Computers and Devices for Communication**" organized by ***Institute of Radio Physics & Electronics, University of Calcutta*** during 19-20 December, 2019.
- "**2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)**" organized by ***Indian Radio Science Society (InRaSS) and Indian Institute of Technology (BHU) Varanasi in Varanasi*** during 12-14 February, 2020.
- "**URSI General Assembly 2021 (URSI GASS 2021)**" organized by ***URSI in Rome, Italy*** during 28 August-4 September, 2021. (Attended virtually)
- "**Indian Conference on Antennas and Propagation (InCAP 2021)**" organized by ***IEEE Rajasthan Subsection and IEEE APS Chapter Jaipur in Malaviya National Institute of Technology (MNIT), Jaipur*** during 13-16 December, 2021. (Online Conference)
- **"XLV Symposium of Optical Society of India Conference on Optics, Photonics and Quantum Optics (COPaQ 2022)"** organized by Department of Physics in ***Indian Institute of Technology Roorkee*** during 10-13 November, 2022.
- **"URSI Regional Conference on Radio Science (URSI-RCRS 2022)"** organized by Department of Astronomy, Astrophysics and Space Engineering (DAASE) in ***Indian Institute of Technology Indore*** during 1-4 December, 2022.
- **"1st International Conference Microwave, Antennas and Propagation Conference (MAPCON 2022)"** organized by IEEE MTT/AP Society Bangalore Joint Chapter in ***Leela Bhartiya City, Bengaluru*** during 12-15 December, 2022.
- **"International Conference on Microwave, Antenna and Communication (MAC 2023)"** sponsored by IEEE UP Section and organized by Motilal Nehru National Institute of Technology Allahabad in ***Motilal Nehru National Institute of Technology Allahabad, Prayagraj*** during 24-26 March, 2023.
- **"Wireless, Antennas and Microwave Symposium (WAMS-2023)"** organized by IEEE in ***Pandit Deendayal Energy University (PDEU). Gandhinagar, Gujarat*** during 7-10 June, 2023.
- "**URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023)**" organized by URSI in ***Sapporo, Japan*** during 19-26 August, 2023.
- **"2nd International Conference Microwave, Antennas and Propagation Conference (MAPCON 2022)"** organized by IEEE MTT/AP Society Gujarat Joint Chapter in ***The Forum Celebration Centre and Wyndham Hotel, Ahmedabad, Gujarat*** during 11-14 December, 2023.
- **"8th International Conference on Computers and Devices for Communications (CODEC 2023)"** organized by Institute of Radio Physics & Electronics at ***Ramakrishna Mission Institute of Culture, Kolkata*** during 14-16 December, 2023.
- **"Wireless, Antennas and Microwave Symposium (WAMS-2024)"** organized by IEEE in ***Raghu Engineering College (A), Visakhapatnam, Andhra Pradesh*** during 29 February – 3 March, 2024.

b) Workshops attended:

- "**Fundamentals of computer**" from ***Computer Society of India*** dated 9th August, 2000.
- "**C.K.Majumder Memorial Summer Workshop On Experimental Physics 2003**" organized by ***Indian Association of Physics Teachers (Regional Council 10A) in collaboration with St. Xavier's College, Kolkata-700016 & Satyendra Nath Bose National Centre For Basic sciences, Kolkata-700098*** from 17th-26th June, 2003.
- **IITF**, 2004.

- "**Optical Communication system and Networking**" organized by ***LEOS Chapter, IEEE Calcutta section*** held on 30th September, 2005 at Meghnad Saha Auditorium, University of Calcutta, Kolkata, India.
- **IITF**, 2005.
- "**RADAR Systems: Recent Trends And Applications**" organized by ***APMTT Chapter, IEEE Calcutta Section*** on 8th September, 2006 held at Meghnad Saha Auditorium, University of Calcutta.
- "**Advances in Communication and Electronic Technology (COMET)**" organized by ***Technical and Quality Improvement Program, UCT-CU*** 16th December, 2006 at University of Calcutta, Kolkata, India.
- "**Advances in Communication**" organized by ***IEEE LEOS Chapter Calcutta Section & IEEE Calcutta University Student Branch, IEEE*** on 28thFebruary, 2007.
- "**Workshop on GNU Compiler Collection aka GCC**" organized by ***Department of Radiophysics & Electronics, in University of Calcutta*** under TEQIP on 9th July, 2007 & 16th July, 2007.
- "**Science & Technological Exhibition (STEX-07)**" organized by ***IEEE Student Branch, University of Calcutta with patronage and sponsorship from IEEE Calcutta Section & TEQIP*** on 8th October, 2007.
- "**Physics & Technology of All-Optical Communication Components and Devices**" at the ***Department of Physics & Meteorology, Indian Institute of Technology, Kharagpur*** from 11th to 16th October, 2007.
- **Science Day Program** organized by ***IEEE LEOS Chapter Calcutta Section & IEEE Calcutta University Student Branch*** with patronage and sponsorship from IEEE Calcutta Section on 28thFebruary, 2008.
- Two day international workshop "**Photonics To Nanophotonics**" organized by ***IEEE Photonics Society, Calcutta Chapter*** during 12th & 13th June, 2009.
- "**IIST Research Scholar Day**" organized by ***Indian Institute of Space Science and Technology held at IIST, Thiruvananthapuram*** on 16th & 17th December, 2011.
- "**Compact Range Technologies for Antenna & RCS Measurements**", by experts from ***Austrium, Germany held at Hotel Orchid, Mumbai*** on 1st February, 2012.
- "**2012 Indian Antenna Week: Advanced Antenna Technology**" organized by ***IEEE AP-MTT Kolkata Chapter in association with UGC Networking Resource Centre in Physical Sciences, University of Calcutta*** held at Hotel Royal Plaza, Gangtok on 27-31 May, 2012.
- "**IEEE-INAE Workshop on Electromagnetics 2018 (IIWE 2018)**" organized by ***IEEE-APS Kerala and Madras Chapter and Indian National Academy of Engineering in association with Indian Institute of Space Science and Technology held at IIST, Thiruvananthapuram*** from 6th to 8th December, 2018.
- **"Sixth IEEE International Workshop on Recent Advances in Photonics (WRAP 2023)"** organized by IEEE Photonics Society UP Section at ***IIIT Allahabad, Prayagraj*** on 8th December, 2023.

c) Schools attended:

- Summer School on "**Photonics – Systems, Modelling Approach & Research Trends (PhotoSMART)**" organized by the ***UGC Networking Resource Centre in Physical Sciences at Institute of Radiophysics and Electronics, University of Calcutta*** during June 1-18, 2010 at the Institute of Radio Physics & Electronics, Kolkata, India.
- School on "**URSI Commission B School for Young Scientists**" organized by the ***International Union of Radio Sciences (URSI)*** on May 20, 2013 at ***International Conference Centre Hiroshima*.**

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I, SOMAK BHATTACHARYYA, do hereby confirm that the information given above is true to the best of my knowledge.

Date: 4 March, 2024
Place: IIT (BHU), Varanasi, Uttar Pradesh - 221005, India

Somak Bhattacharyya

SOMAK BHATTACHARYYA