Sourangsu Banerji

Contact

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Research Interest

1. Nanophotonics
2. Photovoltaics
3. Non Linear Optics
4. Silicon Photonics

Education

2010-2014 **Maulana Abul Kalam Azad University of Technology**, West Bengal, India
Major: B.Tech. in Electronics & Communication Engineering
CGPA: 8.21/10
Thesis: *Study of Electronic & Electromagnetic Properties of One-Dimensional Photonic Crystal*
Advisor: Dr. Arpan Deyasi

Professional Experience

Jan.'2015-May'2016 **Programmer Analyst**
Organization: Cognizant Technology Solutions India Pvt. Ltd.
Domain: Integrated Process Management (EAS-IPM)

Oct.'2014-Dec.'2015 **Associate Software Engineer**
Organization: Tech Mahindra Pvt. Ltd.
Domain: Java Application Services

Scientific Research Experience

Jan.'2014-May'2014 **Undergraduate Research Student**
Department of Electronics & Communication Engineering
Institution: RCC-Institute of Information Technology, West Bengal, India
Project: *Architectural Design of a RAM Arbiter*
Advisor: Dr. Abhishek Basu

Mar.'2013-Aug.'2014 **Visiting Research Student**
Applied Statistics Unit
Institution: Indian Statistical Institute, West Bengal, India
Project: *Application of Fractals in Digital Images*
Advisor: Dr. Pabitra Pal Choudhury

Jun.'2013-Aug.'2013 **Undergraduate Research Student**
Department of Basic Science & Humanitites
Institution: RCC-Institute of Information Technology, West Bengal, India
Project: *Theoretical Study of Current Flow through Real Dielectric Material*
Advisor: Dr. Himadri Mullick

Jun.'2012-Jul.'2013 **Undergraduate Research Student**
Department of Electronics & Communication Engineering
Institution: RCC-Institute of Information Technology, West Bengal, India
Project: *Design and Implementation of an Unmanned Ground Vehicle*
Advisor: Asst. Prof. Saraswati Saha

Internships

Dec.'2012-Jan.'2013 **Winter Research Intern**
Cryogenic Instrumentation Section
Institution: Variable Energy Cyclotron Centre (VECC), West Bengal, India
Project: *Study and Development of a Data Acquisition & Control (DAQ) System Using TCP/Modbus Protocol*
Advisor: Dr. Tamal Kumar Bhattacharyya

Jun.'2013-Jun.'2013 **Industrial Trainee**
Organization: All India Radio, Akashbani Bhawan, West Bengal, India
Project: *Radio Broadcasting of All India Radio: Kolkata*

Publications

Book Chapters

Arpan Deyasi, **Sourangsu Banerji**, Sayan Bose and Abhishek Halder, *"Analytical Computation of Band Structure of 1D Photonic Crystal under Normal Incidence of Electromagnetic Wave"*, Lecture Notes in Electrical Engineering: Computational Advancement in Communication Circuits and Systems, part 6: Advances in Devices and Circuit, vol. 335, Chapter 36, p. 331-338, 2014 [Springer, DOI 10.1007/978-81-322-2274-3_36]

Monograph

Arpan Deyasi, **Sourangsu Banerji**, *"Study of Electronic Properties of 1D Photonic Crystal"*, Lap-Lambert Academic Publishing, Germany, 2014 [ISBN: 978-3-659-61682-2]

Journal

Sourangsu Banerji, Arpan Deyasi, *"Simulating Reflectivity Property for Propagating Wave inside One-Dimensional Photonic Crystal with Different Material Systems"*, Journal of Electron Devices, Volume-21, pp. 1823-1829, March 2015. [ISSN: 1682-3427]

Sourangsu Banerji, Abhishek Halder, Arpan Deyasi, Sayan Bose and Subhasis Mandal, *"Analytical Computation of Density of States of One-Dimensional Photonic Crystal under Polarized Incident Wave for Different Materials"*, Journal of Electron Devices, Volume-19, pp. 1654-1662, April 2014. [ISSN: 1862-3427]

Conference

Arpan Deyasi, and **Sourangsu Banerji**, *"On the Comparative Analysis of the Band Structure of One-Dimensional Photonic Crystal with Different Material Composition under Oblique Wave Incidence"*, National Level Conference on Frontline Research in Computer, Communication and Device, pp.: 155-166, December 2015. [ISBN: 978-93-8592-600-6]

Sourangsu Banerji, and Arpan Deyasi, *"Application of Group Theory in Transfer Matrix Technique for Band Structure Calculation in 1D Photonic Crystal"*, International Conference on Computer, Communication and Control), pp. 1-5, September 2015 [IEEE Xplore, Print ISBN: 978-1-4799-8163-2, DOI-10.1109/IC4.2015.7375647]

Sourangsu Banerji, and Arpan Deyasi, *"Computing Photonic Eigen-Modes and Bandwidth for 1D Photonic Crystal with Different Material Compositions"*, 2nd National Conference on Emerging Trends in Engineering & Sciences, pp. 239-244, July 2015 [ISBN: 978-93-84869-63-2]

Sourangsu Banerji, Arpan Deyasi, Abhishek Halder and Sayan Bose, *"Analysis of Reflectivity for Propagating Wave inside 1D Photonic Crystal with Different Material Systems"*, International Conference on Computing, Communication & Manufacturing, pp. 162-166, December 2014 [ISBN: 978-0-9940194-0-0, ACEEE-CPS]

Arpan Deyasi, **Sourangsu Banerji**, Abhishek Halder and Sayan Bose, *"Theoretical Investigation on Photonic Bandgap Tailoring in One-Dimensional Photonic Crystal using Different Numerical Methods"*, International Conference on Devices, Circuits and Communications, pp. 1-6, September 2014 [IEEE Xplore, Print ISBN: 978-1-4799-6052-3 DOI: 10.1109/ICDCCom.2014.70247461]

Sayan Bose, Abhishek Halder, **Sourangsu Banerji** and Arpan Deyasi, *"First-order Calculation of Band Structure of One-Dimensional Photonic Crystal"*, National Conference on Materials, Devices and Circuits in Communication Technology, pp.: 20-23, February 2014. [ISBN: 978-93-80663-20-3]

Sourangsu Banerji, Arpan Deyasi, Abhishek Halder and Sayan Bose, *"Comparative Study of Density of States of 1D Photonic Crystal for Different Polarization Conditions of Incident Wave"*, International Conference on Electronics, Communication and Instrumentation, January 2014. [IEEE Xplore, Print ISBN: 978-1-4799-3982-4, DOI: 10.1109/ICECI.2014.6767359]

Technical Skills

Programming	C, C++, Java, MATLAB, Python
Design Tools & Softwares	Xilinx (VHDL), Microwind, NI LabVIEW, Lumerical MODE Solutions, Lumerical Interconnect, KLayout, Mentor Graphics Pyxis
Others	Windows, IBM System z O/S (Mainframe), Linux, LaTeX

Professional Activities

Reviewer for International Conference on Communication Systems and Network Technologies, Chandigarh, India

Awards and Honors

Mar.'2015	Achieved an All India Rank of 24 in Electronics and Communication Engineering (EC) stream in Graduate Aptitude Test in Engineering (GATE), 2016.
Jan.'2015	Achieved 99.93%tile in Common Aptitude Test (CAT), 2015.
Jun.'2014	Nominated for the Innovative Student Projects Award of Indian National Academy of Engineering (INAE) from college across all engineering departments.
Feb.'2014	Recipient of a Merit Recognition Certificate for securing an All India Rank of 1068 out of around 2,50,000 (approx.) candidates in the 10th NIIT National IT Aptitude Test.
Dec.'2009	Qualified the Regional Mathematical Olympiad (R.M.O-2009) from West Bengal and selected to appear for the Indian National Mathematical Olympiad (INMO-2010) conducted by Homi Bhabha Centre for Science Education-Tata Institute of Fundamental Research (HBCSE-TIFR).
Apr.'2008	Awarded Certificate of Merit and a Gold Medal by St. Marys Ex-Students Association (SMESA) for my performance in the ICSE Examination.