

List of Publications by our faculty members during 2015-16: International Journals

International Journals

1. D. K. Das, **P. K. Swain** and S. Sahoo, "Graphene in Turbine Blades," Mod. Phys. Lett. B (2016) (Accepted).
2. D.P. Samajdar, **T. D. Das** and S. Dhar, "Calculation of Valence Band Structure and Band Dispersion in Indium containing III–V Bismides by k.p method," Computational Materials Science **111**, 497 (2016).
3. D.P. Samajdar, **T. D. Das** and S. Dhar, "*Valence Band Anticrossing model for GaSb_{1-x}Bi_x and GaP_{1-x}Bi_x using k.p Method,*" Material Science in Semiconductor Processing, **40**, 539 (2015).
4. J H Hong, **A. K. Atta**, K. B. Jung, S. B. Kim, J. Heo and D. G. Cho, "Conformationally Locked Tolans, β -sheet Structures and Photophysical Properties," Organic Letters, **Vol. 17**, 6222-6225 (2015).
5. S. Das, A. S. Sharma, **T. D. Das**, and S. Dhar, "Dependence of heavy hole exciton binding energy and the Strain distribution in GaAs_{1-x}Bi_x/GaAs Finite Spherical Quantum Dots on Bi content in the material," Superlattices and Microstructures, **86**, 221 (2015).
6. **S. Maity, S. K. Metya, C. T. Bhunia, P. Chakraborty** and P. P. Sahu, "Improvement of front side contact and quantum efficiency of c-Si solar cell through light induced plating," Optical and Quantum Electronics, **47**, 3391 (2015).
7. **N. Pramanik, A. K. Atta** and Alpana Mahapatra, "Synthesis of Chitosan Phosphate Grafted Nanosized Hydroxyapatite and its Characterization," International Journal on Current Science & Technology, Vol.3, 398 (2015).
8. **P. K. Swain**, K. L. Panigrahi & **S. Maity**, " Supersymmetric D-brane solutions in Godel Universe," International Journal on Current Science & Technology, **Vol. 2**, 319-329 (2015)
9. **A. K. Atta** and **N. Pramanik**, "Carbohydrate based chemosensor for selective detection of Hg²⁺ ion," *International Journal on Current Science & Technology*, **Vol.2**, 331-334 (2015).

10. **S. Maity and P. K. Swain**, “Unsteady flow of thin liquid film over a porous Stretching Sheet in Presence of Transverse Magnetic field,” ,” *International Journal on Current Science & Technology*, **Vol.2**, 335-341 (2015).
11. **S. Maity**, “Unsteady flow of thin nanoliquid film over a stretching sheet in presence of thermal radiation,” *The European Physical Journal Plus*, radiation, 131 (02) (1-15), 2016.
12. **S. Maity**, Y. Ghatani and B. S. Dandapat, Thermocapillary Flow of a Thin Nanoliquid Film Over an Unsteady Stretching Sheet, *ASME J of Heat Transfer* , Vol-138, 402401(1-8), 2016.
13. **A. V. Kumar**, Simulation of Vanilla call option with non-zero dividends using Operator Splitting Method, *Int. Journal on Current Science & Technology*, Vol-3, No.-1, pp. 360-363, (2015).
14. **U. K. Saha**, “Generalized fractional Calculus Operator Involving H-function of several variables,” *Int. Journal on Current Science & Technology*, **Vol-3**, No.-2,. pp-394, (2015).
15. **Shome, M. K**, Kini, S. And Bhardwaj, G., “Group atmosphere and Role characteristics: An interdependency approach in engineers of three large scale public sector organizations, *IJCST*, Vol. 3, p-374-383 (2015).
16. S. Ningthoujam, **S. K Chakraborty** and **C. T. Bhunia**, “New Investigations of Aggressive Packet Combining Scheme to Reduce Transmission Delay and Three States Markov Model Using Multiple Routes to Increase Throughput”, *International Journal of Future Generation Communication and Networking*, Volume: 8, Issue: 5, PP 157-166 2015
17. **S. K. Chakraborty**, **R. S. Goswami** and **C. T. Bhunia**, “A Study to Examine the Superiority of CSAVK, AVK over Conventional Encryption with a Single Key”, *International Journal of Security and Its Applications* Vol. 10, No. 2 (2016), pp.279-286 <http://dx.doi.org/10.14257/ijisia.2016.10.2.25>.
18. **K. Sambyo**, **A. K. Saha** and **C.T. Bhunia**, “An Analysis of Header Compression in Network Node”, *IUP Journal of Information Technology*, Vol 11, Issue: 4(Dec 2015),PP-57-66.
19. **K. Sambyo**, **A. K. Saha** and **C.T. Bhunia**, “Node Skipping Routing”, *International Journal of Advanced Science and Technology*, Vol.85 (2015), pp.1-8.

20. **K. Sambyo, A. K. Saha and C.T. Bhunia**, “Coding Header Compression”, International Journal of Advanced Science and Technology, Vol.84 (2015), pp.55-64.
21. **K. Sambyo, A. K. Saha and C.T. Bhunia**, “Analysis of APC and Code of Practice”, The International Journal of Applied Engineering Research (IJAER), Volume 10, Number 17 (2015), ISSN 0973-4562, pp 37935-37938.
22. **K. C. Baruah, S. Banerjee, M. P. Dutta and C. T. Bhunia**, “An Improved Biometric-based Multi-server Authentication Scheme Using Smart Card”, International Journal of Security and Its Applications , Vol.9, No.1 (2015), pp.397-408.
23. **S. Banerjee, M. P Dutta and C. T. Bhunia** “An Improved Smart Card based Anonymous Multi-Server Remote User Authentication Scheme”, International Journal of Smart Home, Volume 9, No 5, 11-22, 2015.
24. **M. P. Dutta, S Banerjee and C. T Bhunia**, “An Approach to Generate 2-Dimensional AVK to Enhance Security of Shared Information”, International Journal of Security and Its Applications 9 (10), 147-154, 2015.
25. **K. C. Baruah, S. Banerjee, M. P. Dutta and C. T. Bhunia**, “A New Remote User Authentication Scheme based on Graphical Password using Smart Card”, International Journal of Security and Its Applications ,Vol.9, No.12 (2015), pp.237-244.
26. **P. Ghosh, A. S. Roy, S. Chaudhury, S. K. Jana, K. Chaudhury and S. Dasgupta**, “Preparation of albumin based nanoparticles for delivery of fisetin and evaluation of its cytotoxic activity,” International Journal of Biological Macromolecules, **86**, 408-417 (2016).
27. **A. Sharma, P. Kalita and H. Tag**, “Distribution and phytomedicinal aspects of Paris polyphylla Smith from the Eastern Himalayan Region: A review,” TANG [HUMANITAS MEDICINE], **Vol. 5**, Issue. 3, e15 (2015).
28. **R. Pudur and S. Gao**, “Performance Analysis of Savonius Rotor Hydro Generation Scheme with Electronics Load Controller”, *Journal of Renewable Energy*, Hindawi, Vol. **2016**, pp- 1-7 (2016).
29. **R. Pudur, S. Gao**, “Savonius rotor based grid connected hydrokinetic power generation scheme”, Sustainable, Energy Grid and Network (SEGAN), Elsevier, **Vol-5**, pp- 148-155 (2016).

30. **S. Maity** and **C. T. Bhunia**, “Experimental study of some effective surface parameters of crystalline silicon solar cell for getting better performance”, *International Journal of Engineers*, vol. 28, no. 1, pp. 81-87, 2015.
31. N. M. Devi, **S. Maity**, R. Saha and **S. K. Metya**, “RF MEMS and CSRRs-based tunable filter designed for Ku and K bands application”, *Cogent Engineering*, **vol. 2**, no. 1, pp. 1083641, (2015).
32. S. Bhattacharjee, **S. Maity**, **S. K. Metya** and **C. T. Bhunia**, “Performance enhancement of implantable medical antenna using differential feed technique”, *Engineering Science and Technology, an International*, Elsevier, 2015 (Accepted).
33. R. Saha and **S. Maity**, “Design of Micromachining Based Patch Antenna to Enhance Performances for RFID Tag Application”, *Science & Engineering research support Society*, **vol. 8**, no. 1, pp. 261-268, (2015).
34. R. Saha and **S. Maity**, “Ameliorate of bandwidth and return loss of rectangular patch antenna using metamaterial structure for RFID technology”, *Journal of Engineering Science & Technology*, **vol. 11**, no. 9, (2015).
35. **A. Majumder**, B. Nath, D. Sarkar and M. Das, “Cycle in Conventional Combinational Circuits: A Comprehensive Survey”, *International Journal Advanced Science & Technology*, **vol. 80**, pp.53-78, (2015).
36. A. Kar and **A. Majumder**, “A 43 μ watt 3-bit Flash ADC designed with TMCC and Bit Referenced Encoder in 180 nm CMOS Technology”, *International Journal Advanced Science & Technology*, **vol.79**, pp. 49-60, (2015).
37. R. Khumukcham, **Y. Saring** and **C. T. Bhunia**, “Multiple-route APC scheme for data communication”, *International Journal of Advanced Electronics & Communication Systems*, **vol. 4**, no. 1, (2015).
38. **Y. Bulo** and **C. T. Bhunia**, “New Protocol of Aggressive Packet Combining Scheme: An extension to throughput comparison,” *International Journal of Computer Applications, USA*, **vol.113**, no. 5, pp. 5-8, (2015).
39. **Y. Saring**, **Y. Bulo** and **C. T. Bhunia**, “New modifications of aggressive packet combining scheme with improved performance,” *International Journal of Applied Engineering Research*, **vol.10**, no. 5, 2015.

40. **Y. Bulo, Y. Saring and C. T. Bhunia**, "Horizontal and vertical packet combining scheme with maximum erroneous bits limit," International Journal of Applied Engineering Research. (Accepted).
41. T. A. Sheikh, J. Borah and **S. Roy**, "Miniaturized Tri-Band BPF using Asymmetric SIRs and DGS," in International Journal of Signal Processing, Image Processing and Pattern Recognition, vol. 8, no. 2, pp. 337-346, 2015.
42. J. Borah, T. A. Sheikh and **S. Roy**, "Effects of Modified Ground Structure on a CPW-fed Patch Antenna", International Journal of Future Generation Communication and Networking, vol. 8, no. 2, pp. 205-212, 2015.
43. J. Borah, T. A. Sheikh, and **S. Roy**. "A Study of Small CPW-fed Dual-band Antenna using Different Dielectrics." International Journal of Advanced Electronics and Communication Systems 4.1, 2015.
44. T. A. Sheikh, S. Dutta, S. Baruah, P. Sharma, and **S. Roy**, "Obstacle Avoidance Robot Using LabView." IAES International Journal of Robotics and Automation (IJRA) 4.3 (2015).
45. **S. Roy** and C. T. Bhunia, "On Synthesis of Combinational Logic Circuits." International Journal of Computer Applications 127.1 pp. 21-26, 2015.

National Journals: Nil

International Conferences

1. P. K. Das, **K. R. Singh**, A Survey On a Class of Intersection Graph: Self-graphoidal Graph, The 2015 AMMCS–CAIMS Congress, Waterloo, Ontario, Canada from June 7-12, 2015, pp-868.
2. A. Sarkar, **S K Chakraborty, S. Maity and C T Bhunia**, "Simulation and synthesis of graphene layer for biomedical sensor to detect prostate cancer", IEEE conference CODEC-2015, Calcutta University, Dec 2015.
3. S. Ningthoujam, **S. K. Chakraborty, C.T Bhunia**, "New Basic Scheme for Packet Combining to Achieve Fast Error Correction and Higher Throughput", International Conference on Computing and Communication Systems (I3CS'15).

4. A. Sarkar, **S K Chakraborty, C T Bhunia**, “Different Protocols of Aggressive Packet Combining Scheme with Physical Layer Representation”, IEEE conference CODEC-2015, Calcutta University, Dec 2015.
5. S. Dey and **R. S. Goswami**, “ A Morphological Segmentation and Curve-let Features Extraction on Text Region Classification using SVM”, 2015 IEEE International Conference on Computational Intelligence and Computing Research organised by Vickram College of Engineering, Madurai, Tamil Nadu on 11th December 2015
6. **R. S. Goswami, S. Banerjee, M. P. Dutta and C. T. Bhunia**, “Absolute key variation technique of automatic variable key in cryptography”, Proceedings of the 8th International Conference on Security of Information and Networks (SIN 2015), September 8-10, 2015 Sochi/Russia, PP: 65-67, ACM Publisher.
7. **M. P. Dutta, S. Banerjee, R. S. Goswami and C. T. Bhunia**, “New way of Generating Variable Keys in Achieving Perfect Security”, International Conference on Computing and Communication Systems (I3CS’15), 9th -10th April, 2015, NEHU.
8. **S. Banerjee, M. P Dutta, and C. T. Bhunia**, “A perfect dynamic-id and biometric based remote user authentication scheme under multi-server environments using smart cards”, Proceedings of the 8th International Conference on Security of Information and Networks (SIN 2015), Pages 58-64, September 8-10, 2015 Sochi/Russia, ACM Publisher.
9. **M. P. Dutta, S. Banerjee and C. T. Bhunia**, “Generation of Variable Session KeysBased on Piggybacking Strategy”, Proc. of The Third Intl. Conf. on Advances in Computing, Electronics and Communication - ACEC 2015, 20-11th October, 2015, Zurich, Switzerland, pp. 100-104. DOI: 10.15224/978-1-63248-064-4-21.
10. **S. Banerjee, M. P Dutta and C. T. Bhunia**, “Cryptanalysis and Security Enhancement of an Efficient and Secure Dynamic Id based Remote User Authentication Scheme for Multi-Server Environment”, ACM International Conference on Advanced Research in Computer Science Engineering & Technology (ICARCSET-2015), 6-7th March, 2015.
11. **M. P. Dutta, S. Banerjee and C. T. Bhunia**, “Two New Schemes to Generate Automatic Variable Key (AVK) to achieve the Perfect Security in Insecure Communication Channel” ACM International Conference on Advanced Research in Computer Science Engineering & Technology (ICARCSET-2015), 6-7th March, 2015.
12. **A Sarkar, S K Chakraborty and C T Bhunia**, “Different Protocols of Aggressive Packet Combining Scheme with Physical Layer Representation”, IEEE conference CODEC-2015, Calcutta University, Dec 2015.
13. **R. Pudur** and S. Gao, “Performance analysis of Savonius rotor on different aspect ratio for hydropower generation,” ICPDEN IEEE International Conference, 10th – 11th Jan-2015, NERIST.

14. **R. Pudur**, S. Gao, "Single phase power for remote area using Savonius rotor based hydropower generation" IEEE International Conference on Energy, Power and Environment (ICEPE) 12-13, June 2015 NIT Meghalaya.
15. **S. Chatterjee** and S. Chatterjee, "Simulation of SRF PLL based Grid Connected Inverter for Photovoltaic Application", ICPDEN IEEE International Conference, 10th – 11th Jan-2015, NERIST.
16. D. Shah, **S. Chatterjee**, Saibal Chatterjee, Kanchan Bharati, "Tuning Of Fractional Order Pid Controller - A Review", IEEE C2E2 Conference, Kolkata, India, 5th -16th Jan. 2016.
17. **B. Datta** and S. Chatterjee, "Effects of Electrical Field and Electromagnetic Interference in close proximity and Hybrid operation of HVAC and HVDC Transmission Lines", IEEE C2E2 Conference, Kolkata, India, 5th -16th Jan. 2016.
18. K. Gogoi, T. Maity, S. Chatterjee and **B. Datta**, "Modelling and Study of Eastern and North-Eastern Regional Grid of India", IEEE C2E2 Conference, Kolkata, India, 5th -16th Jan. 2016.
19. **S. Maity**, **P. Chakraborty**, R. Raushan, **C. T. Bhunia** and P. P. Sahu, "A compact series resistance model of solar cell for parametric study", ICRCWIP2015, Springer.
20. S. Bhattacharjee and **S. Maity**, "Miniaturization of MEMS based smart patch antennas for bio-medical applications", ICRCWIP2015, Springer.
21. N. M. Devi and **S. Maity**, "Design and optimization of band stop filter using metamaterial structures for k-band applications", ICRCWIP2015, Springer.
22. A. Sarkar, S. Kumar, B. Madhuri and **S. Maity**, "CNT based biomedical sensor for cancer detection", ICRCWIP2015, Springer.
23. R. Saha, L. Sarkar and **S. Maity**, "A Novel MEMS based frequency tunable rectangular patch antenna", ICRCWIP2015, Springer.
24. R. Saha and **S. Maity**, "Design of O-shape metamaterial structure on rectangular patch antenna for RFID application", Electrical, Electronics, Signals, Communication and Optimization (EESCO), 2015 International Conference on, pp. 1-5, 2015.
25. R. Saha, **S. Maity** and N. Trigunayat, "Enhancement of gain, bandwidth and directivity of a patch antenna by increasing dielectric layers of the substrate through micromachining technique for RFID application", Computer Engineering and Applications (ICACEA), 2015 International Conference on Advances in, pp. 321-324, 2015.
26. A. Sharma and **T. D. Das** "MEH – PPV Thickness Variations for High Luminescent Power OLED" Presented at IWPSD 2015, IISC, Bangalore.

27. **T. D. Das**, D. P. Samajdar, M. K. Bhowal and S. Dhar “Liquid Phase Epitaxial Growth and Low Temperature Photoluminescence of InPBi and GaSbBi,” Presented at IWPSD2015, IISC, Bangalore
28. D. Muchahary, **A. J. Mondal**, R. S. Parmer and **A. Majumder**, “A Simplified Design Approach for Efficient Computation on DCT”, 5th IEEE International Conference on Communication System and Network Technologies (CSNT-2015), Gwalior, India.
29. D. Muchahary, **A. J. Mondal** and **A. Majumder**, “A CORDIC Based Design Technique for Efficient Computation of DCT”, International Conference on Communication and Signal Processing (ICCSP-2015), IEEE, Tamilnadu, India.
30. A. D. Borah, **A. J. Mondal**, D. Muchahary and **A. Majumder**, “FIR Low Pass filter design using Crazyness Based article Swarm Optimization Technique”, International Conference on Communication and Signal Processing (ICCSP 2015), IEEE, Tamilnadu, India.
31. S. K. Singh, **A. J. Mondal** and **A. Majumder**, “Generation and Performance Evaluation of Reconfigurable Fault Tolerant Routing Algorithm for 2D-Mesh NoC”, Procedia Computer Science, vol. 57, pp. 232-240, 2015.
32. S. K. Singh, **A. J. Mondal** and **A. Majumder**, “Generation and performance evaluation of reconfigurable random routing algorithm for 2D-mesh NoCs”, Test Symposium (LATS), 2015 16th Latin-American, pp. 1-6, 2015.
33. J. Goswami, S. Ghosh, **A. Majumder** and S. Katiyar, “Development of a Prototype to detect Speed Limit Violation for Better Traffic Management”, 8th International Conference on Contemporary Computing (IC3 - 2015), IEEE, Noida, India.
34. A. Kar, M. Das, B. Nath, D. Sarkar and **A. Majumder**, “Comparative analysis of low power novel encoders for Flash ADC in 45nm technology”, Smart Technologies and Management for Computing, Communication, Controls, Energy and Materials (ICSTM), 2015 International Conference on, pp. 360-365, 2015.
35. M. Das, B. Nath, D. Sarkar, A. Kar and **A. Majumder**, “Design of ultra-low power novel 3-bit flash ADC in 45nm CMOS technology”, Smart Technologies and Management for Computing, Communication, Controls, Energy and Materials (ICSTM), 2015 International Conference on, pp. 239-244, 2015.

36. S. Ghosh, J. Goswami, A. Kumar and **A. Majumder**, "Issues in NFC as a form of contactless communication: A comprehensive survey", Smart Technologies and Management for Computing, Communication, Controls, Energy and Materials (ICSTM), 2015 International Conference on, pp. 245-252, 2015.
37. **A. Majumder**, P. L. Singh, B. Chowdhury and R. Rai, "Synthesis and Realization of N-bit Reversible Register File Used in Bus Organization of Processor Architecture", Procedia Computer Science, vol. 57, pp. 305-312, 2015.
38. **A. Majumder**, P. L. Singh, B. Chowdhury, **A. J. Mondal** and V. Anand, "Efficient Design and Analysis of N-bit Reversible Shift Registers", Procedia Computer Science, vol. 57, pp. 199-208, 2015.
39. P. L. Singh, **A. Majumder**, B. Chowdhury, **A. J. Mondal** and T. S. Shekhawat, "Reducing Delay and Quantum Cost in the Novel Design of Reversible Memory Elements", Procedia Computer Science, vol. 57, pp. 189-198, 2015.
40. P. L. Singh, **A. Majumder**, B. Chowdhury, R. Singh and N. Mishra, "A novel realization of reversible LFSR for its application in cryptography", Signal Processing and Integrated Networks (SPIN), 2015 2nd International Conference on, pp. 601-606, 2015.
41. **A. Majumder**, B. Chowdhury, **A. J. Mondal** and K. Jain, "Investigation on QuineMcCluskey method: A decimal manipulation based novel approach for the minimization of Boolean function", Electronic Design, Computer Networks Automated Verification (EDCAV), 2015 International Conference on, pp. 18-22, 2015.
42. K. Jain, S. K. Singh, **A. Majumder** and **A. J. Mondal**, "Problems encountered in various arbitration techniques used in NOC router: A survey", Electronic Design, Computer Networks Automated Verification (EDCAV), 2015 International Conference on, pp. 62-67, 2015.
43. **A. Majumder**, P. L. Singh, N. Mishra, **A. J. Mondal** and B. Chowdhury, "A novel delay & Quantum Cost efficient reversible realization of $2i \times j$ Random Access Memory", VLSI Systems, Architecture, Technology and Applications (VLSI-SATA), 2015 International Conference on, pp. 1-6, 2015.
44. A. Kar, **A. Majumder**, **A. J. Mondal** and N. Mishra, "Design of ultra-low power flash ADC using TMCC & bit referenced encoder in 180nm technology",

VLSI Systems, Architecture, Technology and Applications (VLSI-SATA), 2015 International Conference on, pp. 1-6, 2015.

45. **S. Roy**, R. Saha and **C. T. Bhunia**, “Multiple Inputs Combinational Logic Minimization by Minterms Set”, in Proc. of 1st International Conference on Recent cognizance in wireless communication & image processing (ICRCWIP-2015), Springer, Jan. 2015.
46. P. Sharma and **Y. Bulo**, “Logical aggressive packet combining with post-reception selection combining scheme for wireless network”, ICCSP – 2015.
47. V. Rajoria, Priyanshu, and **S. K. Metya**, “Automatic Railway Inspection System”, NCCCIP – 2015, NERIST, Nirjuli, May 2015.
48. Debnath, Rubi, V. Hanumante, D. Bhattacharjee, D. Tripathi, and **S. Roy**. "Multilingual speech translator using MATLAB." Electrical, Electronics, Signals, Communication and Optimization (EESCO), 2015 International Conference on. IEEE, 2015.

National Conferences

1. Taipodia, J., Baglari, D., Biswas, S. and **Dey, A.** (2015) “[Dispersion analysis using active MASW survey data](#)” *Indian Geotechnical Conference: IGC 2015*, Pune, India, pp. 1-9.