

CURRICULUM VITAE OF N. P. Maity
(As on 01.05.2018)



PERSONAL

Name : Dr. N. P. Maity (Niladri Pratap Maity)
Current Position : Assistant Professor (Stage-III)
Official Address : Dept. of Electronics & Communication Engineering,
Mizoram University (A Central University),
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ACADEMIC (in Short)

14 years of Teaching experience; **Published** more than ninety five research papers in International and National Journals/Conferences of repute including Elsevier, Springer, IET, IEEE, American Scientific Publishers, Hindwai, World Scientific and etc.; **Principal investigator** of four research Project (1 completed, 1 approved and Sanctioned, and 2 under consideration); **Best Paper Award**, NCSCA, India; **Excellent Paper Award**, ICFIT, Singapore; Paper received **1st Prize** of Prestigious Prof. Lotfi A. Zadeh Memorial 6th International Conference on CCSN 2017; Received **Outstanding Contribution in Reviewing Award** from Microelectronics Reliability, Elsevier, Impact Factor: 1.371; Received **Certificate of Reviewing Award** from Microelectronics Reliability, Elsevier, Impact Factor: 1.371; Received **Certificate of Reviewing Award** from Superlattices and Microstructures, Elsevier, Impact Factor: 2.123; **Life members/members** of eight international (USA, Singapore & Hong Kong) & national

academic/professional bodies; **Academic Member** of World Academy of Science, Engineering & Technology (WASET), USA; **Organized** five national workshop/seminar etc.; **Delivered** three invited lectures in Refresher and Orientation Courses; **Review Board Member** of seven (China, Malaysia, Turkey, Singapore, Thailand and India) conferences and one (Singapore) international ISSN refereed Journal; Regular **Reviewer** of Elsevier, Springer, American Scientific Publishers and others; **Visited Abroad** Malaysia, Thailand, Singapore, UAE and Bangladesh for academic purpose; **Invited Session Chaired** for three International Conferences (Singapore, Thailand and India); Nominated and Selected **SERC Visiting Scientist Fellow Award**, 2010, Department of Science & Technology, Ministry of Science & Technology, Govt. of India; Received **Fast Track Young Scientist Project Award**, 2009, Department of Science & Technology, Ministry of Science & Technology, Govt. of India; **Scientific Board Member** of Computer, Electrical & Electronics Engineer, International Institute of Engineers (IIENG); Includes Biography in **Marquis Who's Who in the World 2016**, 33 Edition as Electronics Engineer and Educator; Selected and Nominated for **Marquis Who's Who in the Asia 2017**; Invited as a **Plenary Speaker** in International Multidisciplinary Research Conference in Thailand, 2016; Awarded **Albert Nelson Marquis Lifetime Achievement Award**, 2017 .

EDUCATIONAL

- **Ph.D. (Engineering)**, National Institute of Technology, Silchar,
(Title: **Tunneling Current and Interface Charge Density for Ultra Thin Promising High-k Dielectric Materials Based MOS Devices**)
- **Ph.D. (Engineering), Course Work**, National Institute of Technology, Silchar, 1st Class 1st, 9.33 (10)
- **M. Tech. (Electronics Design & Technology)**, Tezpur University (A Central University) – 1st Class 3rd, 8.25 (10),
(Title: **Study of Various Types of Pixel Design of CMOS Image Sensors and implementation of Pixel Using 0.8 μm CMOS Technology**, The project has been done in Semi-Conductor Laboratory, Department of Space, Govt. of India)
- **M. Sc. (Electronics)**, Sambalpur University, 1st Class 2nd, 69.28 %.

AWARDS / RECOGNITIONS

- **SERC Visiting Scientist Fellow Award**, 2010, Department of Science & Technology, Ministry of Science & Technology, Govt. of India.
- **Fast Track Young Scientist Project Award**, 2009, Department of Science & Technology, Ministry of Science & Technology, Govt. of India.
- **2017 Albert Nelson Marquis Lifetime Achievement Award**, 2017, Marquis Who's Who.
- **Scientific & Technical Committee Member**, World Academy of Science, Engineering & Technology (WASET), USA.
- **Best Paper Award**, 2007, NCSCA-2007, at Vizag, India.
- **Excellent Paper Award**, ICFIT, 2011, at Singapore.
- **1st Prize Paper Award**, Prestigious Prof. Lotfi A. Zadeh Memorial 6th International Conference on CCSN 2017, 2017, India
- **Outstanding Contribution in Reviewing Award** from Microelectronics Reliability (Impact Factor: 1.371), Elsevier, The Netherlands.
- **Certificate of Reviewing Award** from Microelectronics Reliability (Impact Factor: 1.371), Elsevier, The Netherlands.
- **Certificate of Reviewing Award** from Superlattices and Microstructures, (Impact Factor: 2.123), Elsevier, The Netherlands.
- **Scientific Board Member** of Computer, Electrical & Electronics Engineer, International Institute of Engineers
- **Review Board Member**, International Journal of Computer Theory & Engineering, ISSN: 1793-821X (Online Version); 1793-8201 (Print Version), Singapore.
- **Invited Session Chaired**, International Conference on Power and Energy Engineering, at Bangkok, Thailand, 29th - 31st July 2011.
- **Invited Session Chaired**, International Conference on Future Information Technology, at Singapore, 16th – 18th September, 2011.
- **Review Committee Member**, Universal Researchers in Engineering (URENG), USA

- **Review Committee Member**, Int. Conf. on Image Processing and Computer Science, Turkey, 2015
- **Review Committee Member**, Int. Conf. on Computing Technique and Mechanical Engineering, Thailand, 2015
- **Review Committee Member**, Int. Conf. on Future Computational Technology, Singapore, 2015.
- **Reviewer (selected):**
 1. Supperlattices and Microstructures (**Elsevier, IF: 2.123**)
 2. Journal of Computational Electronics (**Springer, IF: 1.526**)
 3. Microelectronics Reliability (**Elsevier, IF: 1.371**)
 4. Silicon (**Springer, IF: 0.829**)
 5. Journal of Nanoelectronics & Optoelectronics (**Am. Sc. Pub., IF: 0.497**)

MAJOR RESEARCH PROJECTS COMPLETED / ONGOING

- Principle Investigator: “**High-k dielectric materials for metal-oxide-semiconductor devices: Simulation and characterization**”, sponsored by Dept. of Science & Technology (DST), Govt. of India, Rs. 09.60 Lakhs, **Status: Completed.**
- Principle Investigator: “**Development of vocational educational modules and use of haptic devices; virtual laboratories in VLSI and Embedded systems**”, sponsored by Ministry of Human Resource Development (MHRD), Govt. of India, approved (Rs. 50 Lakhs for a pilot for 1st year sanctioned to IIT, Delhi as Coordinator, applied 395 Lakhs for 5 years), **Status: Approved and Sanctioned.**
- Principle Investigator: “**Investigation and Performance Expectation of Extremely Scaled FinFET Device: Application to Memory Design**”, Submitted to Dept. of Science & Technology (DST), Govt. of India, Rs. 26.40 Lakhs, **Status: Under Consideration.**
- Principle Co-Investigator: “**Energy Scavenging for Low-Frequency Vibrations Using MEMS Technology**”, Submitted to Dept. of Science & Technology (DST), Govt. of India, Rs. 32.45 Lakhs, **Status: Under Consideration.**

ADMINISTRATIVE RESPONSIBILITIES

- **Head of the Department**, Dept. of Electronics & Communication Engineering, Mizoram University (June 2007-October 2010).
- **Chairman**, Examination & Time Table Committee” School of Engineering & Technology, Mizoram University, 2014-2015.
- **Chairperson**, for Departmental Committee like; Department Purchase Committee, Department Library Committee etc.
- **Member**, University Court (2007-2010), Mizoram University.
- **Member**, Academic Council (2007-2010), Mizoram University
- **Member**, School Board of Physical Sciences, Mizoram University.
- **Member**, School Board of Engineering & Technology, Mizoram University.
- **Member**, School Board of Earth Sciences & Natural Resource Management, Mizoram University
- **Member**, Board of Professional Studies, Dept. of Electrical Engineering & Mizoram University
- **Member**, Board of Professional Studies, Dept. of Electronics & Communication Engineering & Mizoram University
- **Member**, Board of Professional Studies, Dept. of Information Technology, Mizoram University
- **Co-Ordinator/Faculty In-charge**, Central Counseling Board (AIEEE Counseling). 2009, 2010, Mizoram University.
- **Asst. Officer In-charge**, Examination, Dept. of Electronics & Communication Engineering, Mizoram University.
- **Member Secretary**, Mizoram University Engineering Entrance Examination (MZUEEE), 2008, 2009, 2010, Mizoram University.
- **Member**, Annual Report Committee, 3 Years, Mizoram University.
- **Selection Committee Member** for different Technical Post, NILIET, Aizawl.

- **Member**, Screening Committee for different Technical Post, NILIET, Aizawl.
- **Member**, Screening Committee for different Engineering Departments, Mizoram University.
- **Co-Ordinator**, IQAC, Dept. of Electronics & Communication Engineering, Mizoram University.
- **Co-Ordinator**, Industrial Training, Dept. of Electronics & Communication Engineering, Mizoram University.
- **Member**, Implementation of CBCS Committee (Post Graduate), Mizoram University.
- **Member**, Department Library Committee, Dept. of Electrical Engineering, Mizoram University.
- **Expert Member**, Various College Inspection Committees (Kolasib Govt. College, Champhai Govt. College, Zirteri Govt. College, Serchip Govt. College, Lunglei Higher & Technical Education College, NILIET-Aizawl), Mizoram University.
- **Convener**, National Workshop on Advances in Electronics, Communication & Information Technology (1 week), organized by Mizoram University, IRPEL, University of Calcutta.
- **Convener**, Student Counseling Committee, Dept. of Electronics & Communication Engineering, Mizoram University
- **Co-Ordinator**, NAAC, Dept. of Electronics & Communication Engineering, Mizoram University
- **Co-Ordinator**, NIRF, Dept. of Electronics & Communication Engineering, Mizoram University.

MEMBERSHIP OF THE SCIENTIFIC / PROFESSIONAL BODIES

- **Member**, International Association of Engineers (IAENG), Hong Kong.
- **Member**, International Association of Computer Sciences & Information Technology (IACSIT), Singapore.
- **Member**, World Academy of Science, Engineering & Technology (WASET), USA.
- **Member**, Science & Engineering Institute (SCIEI), USA.

- **Member**, International Institute of Engineers (IIENG)
- **Life Member**, Material Research Society of India (MRSI), India.
- **Life Member**, Photonics Society of India (PSI), India.
- **Life Member**, Semiconductor Society of India (SSI), India.
- **Life Member**, Indian Society for Technical Education (ISTE), India.

VISITED ABROAD

- **Malaysia**, ENCON-2008, December, 2008
- **Thailand**, ICPEE-2008, July-August, 2011
- **Singapore**, ICFIT-2011, September, 2011
- **UAE**, ICMST-2013, August, 2013
- **Dhaka, Bangladesh**, ICMME-2015, December 2015

INVITED LECTURES

- **Introduction to VLSI Chip Design Technology**, Orientation Programme in School of Physical Sciences, Academic Staff College- Mizoram University, 2010.
- **Image Sensor Technology: Challenges and Opportunity**, Orientation Programme in School of Physical Sciences, Academic Staff College- Mizoram University, 2010.
- **Biochip Design**, 1st Refreshers Course in School of Life Sciences, Academic Staff College- Mizoram University, 2011.

SEMINAR / WORKSHOP ORGANISED

- **Convener**, National Workshop Advances in Electronics, Communication & Information Technology (AECI 2011), March 23-26, 2011. Sponsored by, **UGC-NRCPS (University of Calcutta) & Mizoram University**.
- **Member of the Organizing Committee**, National Workshop on Electronic Devices, April 7, 2011. Sponsored by, **IEEE-EDS Calcutta Section & Mizoram University**.

- **Member of the Organizing Committee**, Seminar cum Training Program on Recent Advances in Radiation Physics, April 15, 2011. Sponsored by **Mizoram University**.
- **Member of the Organizing Committee**, National Workshop on Recent Trends of Electronics and Communication, November 1st, 2011. Sponsored by, **Mizoram University**.
- **Member of the Organizing Committee**, National Workshop on Advances in Pattern Analysis and Applications, 05th – 09th March, 2012. Sponsored by, **ISI, Kolkata & Mizoram University**.

SEMINAR / CONFERENCE / SYMPOSIUM ATTENDED

1. **“Solid State Devices & Circuits”** by GNIT, Kolkata, from June 19-June 24, 2006.
2. **“Digital Communication Systems”** by GNIT, Kolkata, from June 26-July 01, 2006.
3. **“National Programme on Technology Enhanced Learning”** by IIT, Guwahati, from May 21- May 22, 2007.
4. **“Physics & Technology of All-Optical Communication Components and Devices”** by IIT, Kharagpur, from October 11- October 16, 2007.
5. **“Conference on Soft Computing and Its Applications”** by ANITS, Vishakhapatnam, from December 21-December 22, 2007.
6. **“Physics of Semiconductor Nanostructures (SemiNano-2008)”** by UGC Networking Center, University of Calcutta, Kolkata, from June 2-20, 2008.
7. **“2nd Engineering Conference: ENCON 2008”** by Universiti Malaysia, Malaysia, from December 18-December 19, 2008.
8. **“Current Trends in Computer Sciences”** by Assam University, Silchar, From February 22 - February 24, 2010.
9. **“Emerging Trends & Applications in Computer Science”** by St. Anthony’s College, Shillong, from April 9-April 10, 2010.
10. **“Refresher Course in Physical Sciences and Engineering”** by Academic Staff college, Mizoram University, from August 18-September 9, 2010.
11. **“Fortran Programming”** by Mizoram University, from November 24- November 26, 2010.
12. **“National Workshop on Computation Physics”** by Mizoram University, from February 14 - February 19, 2011.

13. **“MDP on Export Procedure & Marketing”** by Mizoram University, February 15-February 17, 2011.
14. **“Orientation Course”** by Academic Staff College, Mizoram University, from June 15-July 04, 2011.
15. **“International Conference on Power and Energy Engineering”**, at Bangkok, Thailand, from 29th -31st July 2011.
16. **“International Conference on Future Information Technology”**, at Singapore, from 16th – 18th September, 2011.
17. **“Orientation of Student Counseling and Mental Health, Student Mentoring and Gender Sensitization in the Work Place”** by Mizoram University, on 3rd November, 2011.
18. **“UGC-Infonet Digital Library Consortium”** by Mizoram University, on November 15, 2011.
19. **“UGC-Infonet Digital Library Consortium”** by Mizoram University, on November 16, 2011.
20. **“National Workshop on Advances in Pattern Analysis and Applications”** at Mizoram University, 05th – 09th March, 2012.
21. **“Management Capacity Enhancement Programme on Spiritual Intelligence for Management Excellence”** at National Institute of Technology, Silchar, 31st August – 1st September, 2012.
22. **“National Workshop on Application of Embedded System in Various Field of Electronics”** at National Institute of Technology, Silchar, 28th – 30th September, 2012.
23. **“National Workshop Application Oriented Statistical Training”** at Mizoram University, 18th – 23rd November, 2013
24. **“Refreshers Course on Engineering and Technology”** Academic Staff College, Mizoram University, from July 30-August 19, 2014.
25. **“International Conference on Advances in Engineering & Technology”**, at Jamshedpur, from 11th – 12th October, 2014.
26. **“International Conference on Materials and Manufacturing Engineering”**, at Dhaka, Bangladesh, from 25th -27th December, 2015.
27. **“ISTE-STTP on CMOS, Mixed Signal and Radio Frequency VLSI Design”**, at NIT, Sicha, Organized by IIT, Kharagpur, 30th January - 4th February, 2017.

28. “North East ISI MZU School on Algorithms with Special Focus on Graph”, at Mizoram University, Organized by ISI, Kolkata, 6th -11th March, 2017.
29. “International Conference on Applied Physics and Material Applications”, at Suan Sunandha Rajabhat University, Thailand, 31st May – 2nd June, 2017
30. “6th International Conference on Computing, Communication and Sensor Network (CCSN-2017)”, Kolkata, India, 30th -31st December, 2017
31. “International Conference on Science, Engineering and Technology, at Vellore Technical University, 2nd -3rd April, 2018

PUBLICATIONS

(LAST 2 YEARS)

Journals

Under Review

1. **N. P. Maity**, Reshmi Maity and S. Baishya, “Quantum FinFET and Trigate FinFET: A Comparative Analysis through Analytical Modeling and Simulation”, **Superlattices and Microstructures (Elsevier, SCI, Impact Factor: 2.123)**, Manuscript ID: SM_2018_415.
2. **N. P. Maity**, Reshmi Maity and S. Baishya, “Analytical Modeling and Simulation of Tunneling Current and Tunneling Resistivity for High-k Dielectric Material Al₂O₃ Based MOS Devices”, **Jurnal Teknologi (ESCI, SCOPUS)**, Manuscript ID: 2017-10877.
3. Subhajit Das, Reshmi Maity, **N. P. Maity**, “Efficient FPGA and SoC Based VLSI Architecture of Adaptive Feedback Based Reversible Image Watermarking Algorithm” **Journal of Circuits, Systems and Computers (World Scientific, SCI, Impact Factor: 0.481)**, Manuscript ID: WSPC-JCSC-D-17-00361.
4. **N. P. Maity**, Reshmi Maity and S. Baishya, “An Analytical Model of Surface Potential and Threshold Voltage for Double Gate Heterojunction Tunnel FinFET”, **Journal of Computational Electronics (Springer, SCI, Impact Factor: 1.526)**, Manuscript ID: JCEL-D-18-00171.

5. Reshmi Maity, **N. P. Maity**, Koushik Guha and S. Baishya, “Analysis of Spring Softening Effect on the Collapse Voltage of Capacitive MEMS Ultrasonic Transducers”, **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Manuscript ID: MITE-D-18-00236.
6. K. Srinivasa Rao, K. Vineetha, BVS Sailaja, Koushik Guha, **N. P. Maity**, Reshmi Maity, K. Girija Sravani, “Design, Simulation and Analysis MEMS based Bio-sensors for the detection of Cholera and Diarrhea”, **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Manuscript ID: MITE-D-18-00247.
7. Reshmi Maity, **N. P. Maity**, S. Baishya, “A New Fringing Field Analytical Model for MEMS Based Micromachined Electrostatic Ultrasonic Transducer”, **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Manuscript ID: MITE-D-18-00224.
8. Reshmi Maity, **N. P. Maity**, Koushik Guha and S. Baishya, “Fringing Capacitive Effect of SiC Based MEMS Capacitive Micromachined Ultrasonic Transducers: Analytical Modeling and FEM Simulation”, **Computer and Electrical Engineering (Elsevier, SCI, Impact Factor: 1.570)**, Manuscript ID: COMPELECENG_2018_484.
9. Reshmi Maity, **N. P. Maity**, S. Baishya, “A 3D Simulation Study of Junctionless Double Gate Field Effect Transistor: Application to 6T-SRAM Cell”, **International Journal of Modeling & Simulation (Taylor & Francis, SCOPUS)**, Manuscript ID: TJMS-2018-39.
10. **N. P. Maity**, Praveen Gunturi, Reshmi Maity and S. Baishya, “3-D Comparative Analysis of QFinFET and Trigate FinFET: A Simulation Study”, **Jurnal Teknologi (ESCI, SCOPUS)**, Manuscript ID: 2017-10964.

Published / In Press

11. **N. P. Maity**, Reshmi Maity and S. Baishya, “Voltage and Oxide Thickness Dependent Tunneling Current Density and Tunnel Resistivity Model: Application to High-k Material HfO₂ Based MOS Devices”, **Superlattices and Microstructures (Elsevier, SCI, Impact Factor: 2.123)**, Vol. 111, pp. 628-641, 2017.

12. **N. P. Maity**, Reshmi Maity and S. Baishya, “A Tunneling Current Model with Practical Barrier for Ultra Thin High-k Dielectric ZrO₂ Material Based MOS Devices”, **Silicon (Springer, SCI, Impact Factor: 0.829)**, DOI: 10.1007/s12633-017-9648-4, Online published on 27th December, 2017.
13. **N. P. Maity**, Reshmi Maity and S. Baishya, “The Influence of Image Force Effect on the Accuracy of Modeling of Tunneling Current for Ultra-Thin High-k Dielectric Material Ta₂O₅ Based MOS Devices”, **Journal Material Today: Proceedings (Elsevier, SCOPUS)**, in Press, 2018.
14. **N. P. Maity** and Reshmi Maity, “Modeling of Surface Potential of Cylindrical Surrounding Gate MOSFETs Including Fringing Field Effects”, **Journal Material Today: Proceedings (Elsevier, SCOPUS)**, in Press, 2018.
15. Reshmi Maity, **N. P. Maity**, K. Guha, S. Baishya, “Analysis of fringing capacitance effect on the performance of MEMS based micromachined ultrasonic air transducer”, **IET Micro and Nano Letters (IET, SCI, Impact Factor: 0.723)**, DOI: 10.1049/mnl.2017.0688, Online published in March 2018.
16. Subhajit Das, Reshmi Maity and **N. P. Maity**, “VLSI-Based Pipeline Architecture for Reversible Image Watermarking by Difference Expansion with High-Level Synthesis Approach”, **Circuit, Systems, and Signal Processing (Springer, SCI, Impact Factor: 1.694)**, Vol. 37, Issue. 4, pp. 1575-1593, 2018.
17. **N. P. Maity**, Reshmi Maity and S. Baishya, “Influence of Image Force Effect on Tunneling Current Density for High-k Material ZrO₂ Ultra Thin Films Based MOS Devices”, **Journal of Nanoelectronics and Optoelectronics (American Scientific Publishers, SCI, Impact Factor: 0.497)**, Vol. 12, pp. 67-71, 2017
18. **N. P. Maity**, Reshmi Maity and S. Baishya, “Ultra Thin Body Partial Silicon-on-Insulator MOSFET with Suppressed Floating Body Effect: A Simulation Study”, **Journal of Nanoelectronics and Optoelectronics (American Scientific Publishers, SCI, Impact Factor: 0.497)**, Vol. 12, pp. 472-479, 2017

19. K. Guha, N. M. Laskar, H. J. Gogoi, S. Chanda, K. L. Baishnab, K. Srinivasa Rao, **N. P. Maity**, “An improved analytical model for static pull-in voltage of a flexure MEMS switch,” **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Online Published on 27th April, 2018
20. Reshmi Maity, **N. P. Maity**, K. Srinivasa Rao, K. Guha, S. Baishya, “A New Compact Analytical Model of Nano-Electro-Mechanical-Systems Based Capacitive Micromachined Ultrasonic Transducers for Pulse Echo Imaging”, **Journal of Computational Electronics (Springer, SCI, Impact Factor: 1.526)**, Online published on 1st May, 2018.
21. Reshmi Maity, **N. P. Maity**, R. K. Thapa, and S. Baishya, “An Improved Analytical and Finite Element Method Model of Nanoelectromechanical System Based Micromachined Ultrasonic Transducers”, **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Vol. 23, pp. 2163-2173, 2017
22. Reshmi Maity, **N. P. Maity**, and S. Baishya, “Circular Membrane Approximation Model with the Effect of the Finiteness of the Electrode’s Diameter of MEMS Capacitive Micromachined Ultrasonic Transducers”, **Microsystem Technologies (Springer, SCI, Impact Factor: 1.195)**, Vol. 23, pp. 2163-2173, 2017
23. **N. P. Maity**, R. R. Thakkur, Reshmi Maity, R. K. Thapa and S. Baishya, “Analysis of Interface Trap Densities for Al₂O₃ Dielectric Material based Ultra Thin MOS Devices”, **Applied Mechanics and Materials (Trans Tech Pub., Switzerland, SCOPUS)**, Vol. 860, pp. 25-29, 2017
24. **N. P. Maity**, Reshmi Maity, R. K. Thapa and S. Baishya, “Modeling and Simulation of Tunneling Current Density for Ultra Thin MOS Devices”, **Applied Mechanics and Materials (Trans Tech Pub., Switzerland, SCOPUS)**, Vol. 860, pp. 30-34, 2017
25. Reshmi Maity, **N. P. Maity** and S. Baishya, “Silicon nitride based electro-mechanical model of capacitive micromachined ultrasonic transducers”, **Far East Journal of Electronics and Communication (Pushpa Pub. House, SCOPUS)**, Vol. 17, pp. 749-760, 2017
26. Reshmi Maity, **N. P. Maity**, R. K. Thapa and S. Baishya, “Characterization of Nanoscale Ultrasonic Transducer Elements as Effective Acoustical Devices”, **Applied Mechanics and Materials (Trans Tech Pub., Switzerland, SCOPUS)**, Vol. 860, pp. 35-40, 2017

27. Reshmi Maity, **N. P. Maity**, R. K. Thapa and S. Baishya, “Investigation of Silicon Nitride as an Excellent Membrane Material for MEMS Ultrasonic Transducers”, **Applied Mechanics and Materials (Trans Tech Pub., Switzerland, SCOPUS)**, Vol. 860, pp. 41-50, 2017
28. **N. P. Maity**, Reshmi Maity, R. K. Thapa and S. Baishya, “A Tunneling Current Density model for Ultra Thin HfO₂ High-k Dielectric Material Based MOS Devices”, **Superlattices and Microstructures (Elsevier, SCI, Impact Factor: 2.123)**, Vol. 95, pp. 24-32, 2016
29. **N. P. Maity**, R. R. Thakkur, Reshmi Maity, R. K. Thapa and S. Baishya, “Analysis of Interface Charge Densities for High-k Dielectric Materials based Metal-Oxide-Semiconductor Devices”, **International Journal of Nanoscience (World Scientific, ESCI, SCOPUS)**, Vol. 15, No. 3, 1660011 1-6, 2016
30. R. Maity, Ajay Singh, A. Islam, **N. P. Maity**, R. K. Thapa and S. Baishya, “Lumped Electromechanical Modeling of Capacitive Micromachined Ultrasonic Transducers”, **Materials Today Proceedings Journal (Elsevier, SCOPUS)**, Vol. 3, pp. 2289-2294, 2016.
31. **N. P. Maity**, Reshmi Maity and S. Baishya, “Influence of Image Force Effect on Tunneling Current Density for High-k Material ZrO₂ Ultra Thin Films Based MOS Devices”, **Materials Focus (American Scientific Publishers, ESCI)**, Vol. 5, No. 4, pp. 275-280, 2016

Book Chapters

32. Reshmi Maity and **N. P. Maity**, “Three dimensional finite element method of capacitive micromachined ultrasonic transducer: A Simulation Study”, **Edited Book: Computer Science and Engineering (Taylor & Francis)**, pp. 11-14, ISBN: 978-1-138-02983-5, 2016
33. Reshmi Maity, **N. P. Maity** and Swapnil Vaish “Modeling of MEMS based capacitive micromachined ultrasonic transducer array element at static voltage”, **Edited Book: Computer Science and Engineering (Taylor & Francis)**, pp. 7-10, ISBN: 978-1-138-02983-5, 2016

Conference Proceedings

34. **N. P. Maity**, Reshmi Maity and S. Baishya, “Effect of Image Force on Tunneling Current for Extremely Thin Insulating Field using Zirconium Silicate”, **Proc. of International Conference on Science, Engineering and Technology (ICSET)**, 2nd -3rd April, 2018, Vellore, India.
35. **N. P. Maity**, Reshmi Maity and S. Baishya, “Interface Charge Density by Capacitance Method using Zirconium Silicate Based MOS Devices”, **Proc. of International Conference on Science, Engineering and Technology (ICSET)**, 2nd -3rd April, 2018, Vellore, India.
36. **N. P. Maity**, Reshmi Maity and S. Baishya, “Analysis of Interface Charge Density by Conductance Method using Very Thin High- k Material Tantalum Pentoxide Based MOS Devices”, **Proc. of International Conference on Science, Engineering and Technology (ICSET)**, 2nd -3rd April, 2018, Vellore, India.
37. A. Dixit, **N. P. Maity**, A. Dixit, Ankush, J. S. Rana, and Vijaya Kumar, “Investigation of Surface Potential for Double Gate Hetero Junction Tunnel FinFET: Application to high- k material HfO_2 ”, **IEEE Proc. of International Symposium on Devices, Circuits and Systems (ISDCS)**, 29th – 31st March, 2018.
38. **N. P. Maity**, Reshmi Maity and S. Baishya, “The Influence of Image Force Effect on the Accuracy of Modeling of Tunneling Current for Ultra-Thin High- k Dielectric Material Ta_2O_5 Based MOS Devices”, **Proc. in 3rd International Conference on Applied Physics and Materials Applications (ICAPMA)**, Thailand, 2017.
39. **N. P. Maity** and Reshmi Maity, “Modeling of Surface Potential of Cylindrical Surrounding Gate MOSFETs Including Fringing Field Effects”, **Proc. in 3rd International Conference on Applied Physics and Materials Applications (ICAPMA)**, Thailand, 2017.
40. Reshmi Maity, **N. P. Maity**, Koushik Guha and S. Baishya, “Analytical Modeling and FEM Simulation of Fringing Field Effect of 4H-SiC Based MEMS Capacitive Micromachined Ultrasonic Transducers”, **6th International Conference on Computing, Communication and Sensor Network (CCSN-2017)**, Kolkata, India, 30th -31st December, 2017

41. Reshmi Maity, **N. P. Maity**, Koushik Guha and S. Baishya, “Modeling and Investigation of Collapse Voltage of Capacitive MEMS Ultrasonic Transducer”, **6th International Conference on Computing, Communication and Sensor Network (CCSN-2017)**, Kolkata, India, 30th -31st December, 2017
42. **N. P. Maity**, Reshmi Maity, and S. Baishya, “Three Dimensional Comparative Analysis of QFinFET and Trigate FinFET”, **6th International Conference on Computing, Communication and Sensor Network (CCSN-2017)**, Kolkata, India, 30th -31st December, 2017
43. Reshmi Maity and **N. P. Maity**, “Three dimensional finite element method of capacitive micromachined ultrasonic transducer: A Simulation Study”, **Proc. in International Conference on Computational Science and Engineering (ICCSE-2016)**, Kolkata, 4th -6th October, 2016
44. Reshmi Maity, **N. P. Maity** and Swapnil Vaish “Modeling of MEMS based capacitive micromachined ultrasonic transducer array element at static voltage”, **Proc. in International Conference on Computational Science and Engineering (ICCSE-2016)**, Kolkata, 4th -6th October, 2016