

## Published in International Journals

2018-2019

1. Vikash Kumar, Rishab Mehra, Aminul Islam, " A CMOS active inductor based digital and analog dual tuned voltage-controlled oscillator," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1571–1583, May 2019.
2. Manisha Guduri, Amit Krishna Dwivedi, Sananya Majumder, Riya, and Aminul Islam, "An efficient circuit-level power reduction technique for ultralow power applications," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1689–1697, May 2019.
3. Chandramauleshwar Roy, Aminul Islam, "Power-aware source feedback single-ended 7T SRAM cell at nanoscale regime," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1783–1791, May 2019.
4. Manisha Guduri Vishesh Dokania, Richa Verma, and Aminul Islam, "Minimum Energy Solution for Ultra-Low Power Applications," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1823–1831, May 2019.
5. Rishab Mehra, Aminul Islam, "A Low Power, Temperature Compensated, Robust Design of CS Amplifier in Nanoscale Regime," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1841–1852, May 2019.
6. Anumita Sengupta, Aminul Islam, "Comparative analysis of AlGa<sub>N</sub>/Ga<sub>N</sub> high electron mobility transistor with sapphire and 4H-SiC substrate," *Microsystem Technologies-Micro-and Nanosystems-Information Storage and Processing Systems*, vol. 25, no. 5, pp. 1927–1935, May 2019.
7. Sudip Kundu, Siddhartha Sarkar, Pradip Mandal, Aminul Islam, "Modeling and Sizing of Non-linear CMOS Analog Circuits used in Mixed Signal Systems," *Analog Integrated Circuits and Signal Processing*, vol. 99, no. 1, pp. 95–109, Apr. 2019.
8. Soumitra Pal, Vivek Gupta, Aminul Islam, "Design of CNFET based power- and variability-aware nonvolatile RRAM cell," *Microelectronics Journal* vol. 86, pp. 7–14, Apr. 2019.
9. Vikash Kumar, Rishab Mehra, A. Islam, "Design and Analysis of MISO Bi-quad Active Filter," *International Journal of Electronics*, vol. 106, no. 2, pp. 287 - 304, Oct. 2018.
10. R. Mehra, V. Kumar and A. Islam, "Reliable and Q-Enhanced Floating Active Inductors and Their Application in RF Bandpass Filters," *IEEE Access*, vol. 6, pp. 48181-48194, Sep. 2018.
11. Dipta Chaudhuri Sudip Kundu, Neela Chattoraj," Design and analysis of MEMS based piezoelectric energy harvester for machine monitoring", *Micro-systemTechnologies, springer*, Vol25,Issue 4,pp,1437-1446,Oct 2018

12. Quarratulain, Neela Chatteraj” Parametric study and Analysis of Band Stop Characteristics for a Compact UWB Antenna with Tri-band notches” *Journal of microwaves, opto electronics & electromagnetics Applications*, Vol17, Issue 4, pp.509-527, Dec 2018.
13. Bibha Kumari and Nisha Gupta, “UWB active antenna using dielectric resonator,” *Microwave and Optical Technology Letters*, vol. 60, pp.1894-1898, August 2018.
14. Appasani, Bhargav, Pallav Prince, Rajeev Kumar Ranjan, Nisha Gupta, and Vijay Kumar Verma. "A Simple Multi-band Metamaterial Absorber with Combined Polarization Sensitive and Polarization Insensitive Characteristics for Terahertz Applications." *Plasmonics*, pp. 1-6, 2018.
15. Manish Mathew Tirkey and Nisha Gupta, “The Quest for Perfect Electromagnetic Absorber: A Review,” *International Journal of Microwave and Wireless Technologies*. Vol. 11, pp.151-167, March 2019.
16. Saumya Das, Hashinur Islam, Tanushree Bose, Nisha Gupta; "Coplanar waveguide fed stacked dielectric resonator antenna on safety helmet for rescue workers," *Microwave and Optical Technology Letters*, vol. 61, pp. 498-502, Feb. 2019.
17. Manish Mathew Tirkey, Nisha Gupta; Electromagnetic absorber design challenges, *IEEE Electromagnetic Compatibility Magazine*, vol. 8, pp. 59-65 (2019).
18. Saumya Das, Hashinur Islam, Tanushree Bose, Nisha Gupta; Ultra-Wide Band CPW-Fed Circularly Polarized Microstrip Antenna for Wearable Applications”, *Wireless Personal Communications*, Jan. 20 (2019).
19. Itu Snigdha, and Nisha Gupta, “Enhancing reliability by adoptive graph traversals for backbone-assisted communication in wireless sensor networks,” *International Journal of Sensor Networks*, vol. 30, pp. 13-23 2019.
20. Verma, V.K., Mishra, S.K., Kaushal, K.K., Lekshmi, V., Sudhakar, S., Gupta, N. and Appasani, B., “An Octaband Polarization Insensitive Terahertz Metamaterial Absorber Using Orthogonal Elliptical Ring Resonators,” *Plasmonics*, pp.1-7, 2019.
21. Atul Kumar Pandey, Nisha Gupta, "An Energy Efficient Clustering-based Load Adaptive MAC (CLA-MAC) Protocol for Wireless Sensor Networks in IoT", *International Journal of Wireless and Microwave Technologies*, vol.9, pp. 38-55, 2019.
22. Rupesh Kumar Sinha and Sahu S.S, “Secure Image Encryption Based on Improved Bat Optimized Piecewise Linear Chaotic Map through Integrated Permutation-Confusion and Double diffusion”, Special Issue on Ambient Advancements in Intelligent Computational Sciences, *Journal of Intelligent & Fuzzy Systems- Applications in Engineering and Technology*, Vol.35, No. 2, pp. 1567-1578, August 2018.
23. Rupesh Kumar Sinha and Sahu S.S, “Adaptive Firefly Algorithm Based Optimized Key Generation for Image Security”, Special Issue on Intelligent, Smart and Scalable Cyber-

Physical Systems, *Journal of Intelligent & Fuzzy Systems- Applications in Engineering and Technology*, Vol. 36, No. 5, pp. 4437-4447, 2019.

24. Md Maqubool Hosain, Sumana Kumari and Anjini Kumar Tiwary, Compact Filtenna for WLAN Applications, *Journal of Microwaves, Optoelectronics and Electromagnetic Applications*, vol. 18, no. 1, pp. 70-79, March 2019.
25. Manish Mathew Tirkey and Anjini Kumar Tiwary, A Compact Dual-Band Antenna Using Hexagonal Complementary Split Ring Resonator, *Microwave Review*, vol. 24, no. 2, pp. 19-25, December 2018.
26. Shikha Swaroop Sharma, Atul Kumar Pandey and Anjini Kumar Tiwary, New method of analysis and design of frequency and bandwidth reconfigurable active filter, *International Journal of RF and microwave computer-aided engineering*, vol. 28, issue 9, pp. e21556, 8th November 2018.
27. Arumita Biswas, Vibha Rani Gupta, "Design of Penta-Band MIMO Antenna for GPS/2G/3G/4G and 5G NR Applications", *International Journal of Recent Technology and Engineering (IJRTE)*, Vol. 8 (1), pp. 1935- 1940, May 2019.
28. S. Prasad, R. Prasad, "Fusion Multistyle Training for Speaker Identification of Disguised Speech", *Wireless Personal Communications (Springer)*, vol-104, pp. 895-905, Feb. 2019.
29. Soumya Sidhishwari, Mainak Basu and S. K. Ghorai, "A Modal interference-based Fiber Optic Sensor for Dual Parameter Measurement using an Artificial Neural Network," *Optical Fiber Technology*, 50 (2019), pp.216–224.
30. Uday Kumar, Dileep Kumar Upadhyay, "A Highly Compact UWB Bandpass Filter using Via-less CRLH TL" *Microwave review*, Vol. 24, No. 2, pp. 26-30, Dec. 2018.
31. Abhishek Kumar, Dileep Kumar Upadhyay, "A Compact Planar Diplexer based on Via-Free CRLH TL for WiMAX and WLAN Applications," *International Journal of Microwave and Wireless Technologies*, Vol.11 Issue 02, pp. 130-138, March. 2019.
32. Dileep Kumar Upadhyay, "Development of ZOR using via-less CRLH-TL", *Microwave Review*, Vol. 24, No. 1, pp. 3-7, July. 2018.
33. M.Basu, S. K. Ghorai "An optical soft-sensor based shape sensing using a bio-inspired pattern recognition technique to realise fly-by-feel capability for intelligent aircraft operation", *The Aeronautical Journal*, vol. 122 no 1257, p-1734-52, November 2018.
34. A. N. Ghazali, Mohd Sazid and S. Pal, "A Dual Notched Band UWB-BPF Based on Microstrip-to-Short Circuited CPW Transition", *International Journal of Microwave and Wireless Technologies*, Vol. 10, Special Issue 7 (Electronic Warfare), pp. 794-800, September 2018.
35. Arindam Biswas, Sayantan Sinha, Aritra Acharyya, Amit Banerjee, Srikanta Pal, Hiroaki Satoh, Hiroshi Inokawa, "1.0 THz GaN IMPATT Source: Effect of Parasitic Series

Resistance”, *Journal of Infrared, Millimeter, and Terahertz Waves*, Vol. 39, No. 10, pp. 954-974, Oct 2018.

36. Rohan Basu Roy, Alekhya Ghosh, Soham Bhattacharyya, Raju P. Mahto, Kanchan Kumari, Surjya K. Pal, Srikanta Pal, “Weld defect identification in friction stir welding through optimized wavelet transformation of signals and validation through X-ray micro-CT scan”, *International Journal of Advanced Manufacturing Technology*, Vol. 99, pp. 623–633, October 2018.
37. Shailendra Singh, Madhur Deo Upadhyay, Srikanta Pal, “Study of Orbital Angular Momentum in Electromagnetic waves using UCA”, *Asian Journal of Convergence in Technology*, Vol. IV, No. I, April 2018.
38. Abu Ghazali, Jabir Hussain, Srikanta Pal, “A Hybrid Surface-to-Surface Transition Based UWB-BPF with Multiple In-Band Interference Suppression”, *International Journal of Microwave and Wireless Technologies*, Vol. 11, No. 2, pp. 1-7, January 2019.
39. Patro KAK, Acharya B., Nath V., “Secure, Lossless and Noise-resistive Image Encryption using chaos, Hyper-chaos and DNA sequence operation”, *IETE Technical Review*, vol.- 37, issue-03, pp.223-245. Online 2nd April 2019.
40. Patro KAK, Acharya B., Nath V., “Secure Multilevel permutation diffusion based image encryption using chaotic and hypo chaotic”, *Microsystem Technologies*, vol.- 25, issue-12, pp4593-4607, 18th March 2019.
41. Priyadarshi R., Nath V., “A novel diamond-hexagon search algorithm for motion estimation”, *Microsystem Technologies*, vol.- 25, issue-12, pp.4587-4591, 5th March 2019.
42. Maiti M, Saw SK, Nath V., Majumdar A., “A power efficient PFD-CP architecture for high speed clock and data recovery application”, *Microsystem Technologies*, vol.25, issue-12, pp4615-4624, 5th March 2019.
43. Shylashree N, Sangeetha BG, Thonse A, Nath V., “Ge4Sb1Te5 device case study for NVRAM applications”, *Microsystem Technologies*, vol.25, issue-12, pp4609-4613, 5th March 2019.
44. Patro, K.A.K., Acharya, B., Nath, V. , “A secure multi-stage one-round bit-plane permutation operation based chaotic image encryption”, *Microsystem Technologies*, vol.-25, issue-6, pp2331-2338, 2019.
45. Prasad, D., Nath, V., Vishwanthan, V., Mehta, M., “A 0.6 V 117 nW high performance energy efficient system-on-chip (SoC) CMOS temperature sensor in 0.18  $\mu\text{m}$  CMOS for aerospace applications”, *Microsystem Technologies*, vol. - 25, issue-06, pp2301-2311. 2019.
46. Priyadarshi R, Rawat P, Nath V., “Energy dependent cluster formation in heterogeneous wireless sensor network”, *Microsystem Technologies*, vol. - 25, issue-06, pp2313-2332, 2019.
47. Qadeer S.A., Khan M.Y., N.Shylashree, Nath V., “ High resolution fuel indicating and tracking system”, *Microsystem Technologies*, vol.- 25, issue-06, pp2267-2271, 2019.

48. N. Shylashree, Venkatesh B., Saurab T.M., Srinivasan T, Nath V. , “Design and analysis of high-speed 8-bit ALU using 18 nm FinFET technology”, *Microsystem Technologies*, vol.- 25, issue-06, pp2349-2359, 2019.
49. Gupta P., Verma V.K., Ranjan RK, Appasani B., Priyadarshini B., Nath V., “ A series expansion method aided design of current mode second generation current conveyor based active control circuit. *Microsystem Technologies*, vol.25, issue-06, pp.2323-2330, August 2018.
50. Verma V.K., Ranjan R.K., Gupta P., Priyadarshini B., Nath V. (2018) A Series Expansin Method Aided Design of CCII Controller for TITO System, *Microsystem Technologies*, vol 24, issue 9, pp3843-3849, Online Sept 2018.
51. Priyadarshi, R., Soni, S.K. & Nath V.(2018) Energy Efficient Cluster Head Formation in Wireless Sensor Network, *Microsystem Technologies*, vol 24, issue 12, pp4775-4784, Dec-2018.
52. Chakraborty S., Pandey A., Prasad D., Vedam V., Nath V.(2018). Linearity improvement of gain enhanced op-amp using cross-coupled architecture. *Microsystem Technologies*, vol 24, issue 12, pp4807-4815, Dec-2018.
53. Bhattacharyya, S., Mukul, M.K., “Reactive frequency band-based movement imagery classification”, *Journal of Ambient Intelligence and Humanized Computing*, <https://doi.org/10.1007/s12652-018-0725-3>, 2018.
54. Bhattacharyya, S., Mukul, M.K., “Time-Frequency Series Based Movement Imagery Classification” , *International Journal of Biomedical Engineering and Technology*, Vol.27 No.1/2, pp.151 – 165, 2018.
55. Bhattacharyya, S., Mukul, M.K.,” Reactive Frequency Band based Real -Time Motor Imagery Classification” *International Journal of Intelligent Systems Technologies and Applications (IJISTA)*, Vol. 17, No. 1/2, pp. 136-152, 2018.
56. S Kumari, Sitanshu S Sahu, B Gupta, " Efficient SSHI circuit for piezoelectric energy harvester uses one shot pulse boost converter", *Journal of Analog Integrated Circuits and Signal Processing*, ISSN: 0925-10302018, 2018.(In press).
57. Ram Chandra Barik, Sitanshu Sekhar Sahu and Suvamoy Changder, “A Novel Smooth texture based visual cryptography approach for secure communication” *Journal of Electronic Security and Digital Forensic*, Vol. 10, No. 2, pp: 109-137, 2018.
58. Jai Utkarsh, Raju Kumar Pandey, Shrey Kumar Dubey, Shubham Sinha, S. S. Sahu, “Classification of Atrial Arrhythmias using Neural Networks”, *IAES International Journal of Artificial Intelligence*, Vol. 7, No. 2, pp. 90-94, 2018.

59. Prajna Parimita Dash, Dipti Patra, "Efficient visual tracking using multi-feature regularized robust sparse coding and quantum particle filter based localization", *Journal of Ambient Intelligence and Humanized Computing*, Vol.10(2), February 2019.

### **Published in International Conference**

#### **2018-2019**

1. Krishnpriya Sinha, Pawan Kumar Sahu, Ritesh Ranjan, Shashank Kumar Dubey, Aminul Islam, "Investigation of impact of high Al content with AlN/GaN HEMT," *7th International Conference on Computing, Communication and Sensor Network (CCSN2018)*, Kolkata, 27-28 Oct. 2018, pp. 94-98, ISBN: 81-85824-46-2.
2. Subhankar Bose, Soumitra Pal, Aminul Islam, "An SRAM Cell design for Wireless Sensor Network IoT applications," *7th International Conference on Computing, Communication and Sensor Network (CCSN2018)*, Kolkata, 27-28 Oct. 2018, pp. 131-137, ISBN: 81-85824-46-2.
3. Nilay Aishwarya, Abhijeet Nayak, Subhankar Bose, Vikash Kumar, and Aminul Islam, "A Memristor Emulator Circuit Using CNFET," *7th International Conference on Computing, Communication and Sensor Network (CCSN2018)*, Kolkata, 27-28 Oct. 2018, pp. 248-252, ISBN: 81-85824-46-2.
4. M. M. Tirkey and N. Gupta, "A Paper Based Perfect Electromagnetic Wave Absorber Using Conducting Grid Pattern," *15th International Conference on ElectroMagnetic Interference & Compatibility (INCEMIC)*, 2018, pp. 1-4, doi: 10.1109/INCEMIC.2018.8704588.
5. Rupesh Kumar Sinha, Baddigam Asha, Niraj San, Savvy Prasad, S.S. Sahu, "Chaotic Image Encryption Scheme Based on S-Box Substitution", *IEEE International Conference on Inventive Research in Computing Applications (ICIRCA 2018)*, Coimbatore, India, July 11-12,2018.
6. Rupesh Kumar Sinha, Iti Agrawal, Kritika Jain, Anushka Gupta, S.S. Sahu, "Image Encryption using Modified Rubik's Cube Algorithm", *International Conference on Computational Intelligence (ICCI 2018)*, BIT Mesra, Ranchi, 10-11 December 2018.
7. Arumita Biswas, Vibha Rani Gupta, "Novel Compact Meandered Monopole Antenna for Smartphone Covering Fifteen LTE Bands", *International Conference on Electrical, Communication, Electronics, Instrumentation and Computing (ECEIC)*, 30th & 31st January 2019.
8. S. Singha, A. S. Singh, S. Prasad and A. Alam, "A Study on Power Optimization Techniques in PSoc," *2019 International Conference on Communication and Signal Processing (ICCSP)*, 2019, pp. 0225-0229, doi: 10.1109/ICCSP.2019.8698070,2019.
9. Nidhi Jha, Soumya Sidhishwari, "Analysis of Dispersion Compensation Techniques used in Optical Fiber Communication", *4th International Conference on Microelectronics, Computing & Communication Systems (MCCS-2019)*, May 11-12, ARTTC BSNL Ranchi, 2019.

10. Niraj Kumar Gupta, Srikanta Pal, "Design of 2-7GHz Voltage Controlled Oscillator using multi-stage current starved configuration", *4th International Conference on Microelectronics, Computing & Communication Systems (MCCS-2019)*, May 11-12, ARTTC BSNL Ranchi, 2019.
11. Deepmoy Banerjee, Srikanta Pal, "Design of Low Power, Compact Size, Wideband RF Mixer", *4th International Conference on Microelectronics, Computing & Communication Systems (MCCS-2019)*, May 11-12, ARTTC BSNL Ranchi, 2019.
12. Babu Linkoon P Meenaketan, Srikanta Pal and N. Chattoraj, "Electromagnetic Scattering Analysis Due to A Colliding System Using Quasi Stationary -Finite Difference Time Domain Method", *Proceedings of the IEEE- Asia-Pacific Radio Science Conference*, Mar 09-15, New Delhi, 2019, IEEE, DOI: 10.23919/URSIAP-RASC.2019.8738410, June 2019.
13. Babu Linkoon P Meenaketan, Srikanta Pal and N. Chattoraj, "Inverse Scattering Using Scattered Field Pattern", *Proceedings of the IEEE-International Symposium on Antennas and Propagation*, Dec 3-5, Cochin, 2018.
14. Abu Ghazali and Srikanta Pal, "Dual-Band Notched UWB-BPF for Indoor Communication Systems", *IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication (AESPC-2018)*, 22nd -24th October, KIIT University, Bhubaneswar, India.
15. Babu Linkoon P Meenaketan, Srikanta Pal and Neela Chattoraj, "Electromagnetic inverse Scattering for dynamic fluid level detection", *IEEE International Conference on Applied Electromagnetics, Signal Processing & Communication (AESPC-2018)*, 22nd -24th October, KIIT University, Bhubaneswar, India, IEEE, DOI: 10.1109/AESPC44649.2018.9033388.
16. Sabiha Fathma, Prajna Parimita Dash, "Moment Invariant based Weed/Crop Discrimination for smart farming", *International Conference on Computer, Electrical & Communication Engineering, IEEE-ICCECE*, Techno India University, Kolkata, 16-18 January 2019.
17. Sourav Gupta, Sushant Anand, Mohit Kumar, Sarah Asheer, and Sanjeet Kumar, "Performance evaluation of an energy efficient clustering algorithm based on heterogeneous node deployment in a wireless sensor network", *IEEE Conference on Information and Communication Technology (CICT 2018)*, at PDPM-Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, Madhya Pradesh, India, October 26-28, 2018.
18. Karan, Biswajit, Kartik Mahto, and Sitanshu Sekhar Sahu. "Detection of Parkinson disease using variational mode decomposition of speech signal." *2018 International Conference on Communication and Signal Processing (ICCSP)*. IEEE, 2018.
19. Satvika Anand, Dr. M K Mukul: "Early Epileptic seizure detection" *10th International Conference on Computing, Communication and Networking Technologies (ICCCNT) 2019*, IIT Kanpur, India.
20. Premjeet Singh, Manoj Kumar Mukul and Rajkishore Prasad, " Enhancement of Bone Conducted Speech Signal using LPC and MFCC", *International Conference on Intelligent Computer Interaction (IHCI 2018)*, IIIT Allahabad, 7-9 December, 2018.

21. Premjeet Singh, Manoj Kumar Mukul and Rajkishore Prasad, “Enhancement of Bone Conducted Speech Signal by Wavelet Transform”, *International Conference on Signal Processing and Communications (SPCOM 2018)*, IISC Bangalore, 16-19 July, 2018.
22. M. Kankanala, P malla, K Vipul, S S Tripathy, S S Solanki “ Malaria Detection using Foldscope and Smartphone”, Proceedings of Third IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), pp. 1693-1696, 20-22 Feb. 2019.
23. R. Mohanty, B.K.Mallik, S.S.Solanki, “Parametric representstions of Automatic bird call recognition systems using Gaussian Mixture Model”, at *ICRIEECE 2018* on 27-28 July 2018 held at KIIT Bhubneshwar, Odisha.

### **Published in book chapters**

#### **2018-2019**

1. Deepshikha Bharti and Aminul Islam (2018), “U-Shaped Gate Trench Metal Oxide Semiconductor Field Effect Transistor: Structures and Characteristics,” chapter: 4, pp. 69 – 90, title of the book: *Nanoscale devices : physics, modeling, and their application*, edited by Brajesh Kumar Kaushik, Print: ISBN 9781138060340, Online: ISBN 9781315163116, publisher: CRC Press Taylor & Francis Group, Boca Raton, Florida, USA. [https://books.google.co.in/books/about/Nanoscale\\_Devices.html?id=Bjd7DwAAQBAJ&source=kp\\_book\\_description&redir\\_esc=y](https://books.google.co.in/books/about/Nanoscale_Devices.html?id=Bjd7DwAAQBAJ&source=kp_book_description&redir_esc=y).
2. Deepshikha Bharti and Aminul Islam, “Operational Characteristics of Vertically Diffused Metal Oxide Semiconductor Field Effect Transistor,” chapter: 5, pp. 91 – 108, title of the book: *Nanoscale devices : physics, modeling, and their application*, edited by Brajesh Kumar Kaushik, Print: ISBN 9781138060340, Online: ISBN 9781315163116, Publisher: CRC Press, Taylor & Francis Group, Boca Raton, Florida, USA. [https://books.google.co.in/books/about/Nanoscale\\_Devices.html?id=Bjd7DwAAQBAJ&source=kp\\_book\\_description&redir\\_esc=y](https://books.google.co.in/books/about/Nanoscale_Devices.html?id=Bjd7DwAAQBAJ&source=kp_book_description&redir_esc=y).
3. Saha S., Dubey S.K., Banerjee S., Pal I., Islam A. (2018), “Nonvolatile Write Driver for Spin Transfer Torque Memory and Logic Design”, In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 156 – 166, vol 836, 24 August 2018. Publisher, Springer, Singapore, DOI: [https://doi.org/10.1007/978-981-13-1343-1\\_17](https://doi.org/10.1007/978-981-13-1343-1_17), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_17](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_17).
4. Agrawal K., Chowdhury S., Dubey S.K., Islam A. (2018), “Robustness Study of Muller C-element”, In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 131- 139, vol 836, 24 August 2018. Publisher, Springer, Singapore, DOI: [https://doi.org/10.1007/978-981-13-1343-1\\_15](https://doi.org/10.1007/978-981-13-1343-1_15), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_15](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_15).



5. Gon A., Kumar V., Pandey S., Islam A. (2018), "Multi-functional Active Filter Design Using Three VDTAs", In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 124 – 130, vol 836, 24 August 2018. Publisher: Springer, Singapore, [https://doi.org/10.1007/978-981-13-1343-1\\_14](https://doi.org/10.1007/978-981-13-1343-1_14), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_14](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_14).
6. Pal I., Kumar V., Saha S., Banerjee S., Islam A. (2018), "An Electronically-Tuneable VDTA Based Sinusoidal Oscillator", In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 115 – 123, vol 836, 24 August 2018. Publisher, Springer, Singapore, DOI: [https://doi.org/10.1007/978-981-13-1343-1\\_13](https://doi.org/10.1007/978-981-13-1343-1_13), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_13](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_13).
7. Singh P., Kumar V., Patnaik L.P., Islam A. (2018), "A VDIBA Based Voltage-Mode Highpass and Bandpass Filter", In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 83 – 89, vol 836, 24 August 2018. Publisher: Springer, Singapore, DOI: [https://doi.org/10.1007/978-981-13-1343-1\\_9](https://doi.org/10.1007/978-981-13-1343-1_9), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_9](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_9).
8. Ankit K., Kumar R., Prakash O., Islam A. (2018), "Optimization of InP HEMT Using Multilayered Cap and Asymmetric Gate Recess", In: Mandal J., Sinha D. (eds) *Social Transformation – Digital Way. CSI 2018. Communications in Computer and Information Science*, pp. 19-28, vol 836, 24 August 2018. Publisher, Springer, Singapore, DOI: [https://doi.org/10.1007/978-981-13-1343-1\\_3](https://doi.org/10.1007/978-981-13-1343-1_3), print ISBN: 978-981-13-1342-4, Online ISBN: 978-981-13-1343-1, [https://link.springer.com/chapter/10.1007/978-981-13-1343-1\\_3](https://link.springer.com/chapter/10.1007/978-981-13-1343-1_3).
9. Dwivedi A.K., Guduri M., Islam A., "Performance Enhancement of Full Adder Circuit: Current Mode Operated Majority Function Based Design", In: Bhateja V., Tavares J., Rani B., Prasad V., Raju K. (eds) *Proceedings of the Second International Conference on Computational Intelligence and Informatics, Part of the Advances in Intelligent Systems and Computing (AISC) book series*, vol. 712, pp. 569-578, 24 July 2018, Publisher: Springer, Singapore, Print ISBN: 978-981-10-8227-6, Online ISBN: 978-981-10-8228-3, DOI: [https://doi.org/10.1007/978-981-10-8228-3\\_52](https://doi.org/10.1007/978-981-10-8228-3_52).
10. Hosain M.M., Kumari S., Tiwary A.K. (2018), "Design of Circular Disc Monopole Antenna for UWB Application", In: Nath V. (eds) *Proceedings of the International Conference on Microelectronics, Computing & Communication Systems. Lecture Notes in Electrical Engineering*, vol 453. Springer, Singapore. [https://doi.org/10.1007/978-981-10-5565-2\\_30](https://doi.org/10.1007/978-981-10-5565-2_30).
11. Pratik Roopchandka, Saiba Khanam, Ratnesh Dhan, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), "Design of Password Based Door Locking System. In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems*", *Lecture Notes in Electrical Engineering*, vol. 556, pp 605-612. Springer, Singapore, DOI: [10.1007/978-981-13-7091-5\\_50](https://doi.org/10.1007/978-981-13-7091-5_50). Scopus Book Chapter.

12. Rishabh Jain, AnveshAshu, Shivam Lal, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), "Application of Burglary Alarm System to Avoid Railway Accidents In: book: Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems", *Lecture Notes in Electrical Engineering*, vol.556, pp.595-604. Springer, Singapore DOI: 10.1007/978-981-13-7091-5\_49. Scopus Book Chapter.
13. Chaitanya Tyagi, Shantum Verma, Abhishek Pandey, Deepak Prasad and Vijay Nath (2019), "Study and Design of Electro-Pneumatic Shifting system", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 481-488. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_39. Scopus Book Chapter.
14. Anukriti Jha, Anshuman Singh, Roshan Kerketta, Deepak Prasad, Kumari Neelam and Vijay Nath (2019), "Development of Autonomous Garbage Collector Robot", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 567-576. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_46. Scopus Book Chapter.
15. Gurpreet Singh, Kumari Nivedita, Sachinsanjay Minz, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), "Design of Water Overflow Indicator Alarm and Controller", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 623-630. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_52. Scopus Book Chapter.
16. Neha Nidhi, Deepak Prasad, M. Kumari, A. Pandey, S. S. Solanki, A. Kumar, K. K. Thakur and V. Nath (2019), "Design of Low Power 3-Bit CMOS Flash ADC for Aerospace Application", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, Vol. 556, pp 585-594. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_48. Scopus Book Chapter.
17. Rudraksh Agarwal, Deepak Prasad, Kumari Neelam, Abhishek Pandey and Vijay Nath (2019), "An Assessment of Advanced Transportation research Opportunities", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 631-640. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_53. Scopus Book.
18. Aditya, AlwishLakra, kajal Murmu, Deepak Prasad and Vijay Nath (2019), "Study and Development of Solar-Powered Water Pumping System", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp. 655-660 . Springer, Singapore DOI: 10.1007/978-981-13-7091-5\_56. Scopus Book Chapter.
19. Udit Anchalia, Konda Praneeth Reddy, Abhay Modi, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), "Study and Design of Biometric Security Systems: Fingerprint and Speech Technology", In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical*

*Engineering*, vol. 556, pp577-584. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_47. Scopus Book Chapter.

20. Suvid Sahay, Nitika Sharma, Shubham Raj, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), “Development of Wireless Power Transfer System with Internet of Things”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 613-622. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_51. Scopus Book Chapter.
21. Ankur Shrivastava, Shiksha Rawat, Harsh Kumar Singh, Kumari Neelam, Deepak Prasad and Vijay Nath (2019), “Preemption of Traffic Signal Using Global Positioning System (GPS)”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 641-648. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_54. Scopus Book Chapter.
22. Yash Goyal, Sanskar Agarwal, Subrata Barman, Ashutosh Pranav, Deepak Prasad and Vijay Nath (2019), “Evolution of Pacemaker: A Review”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 649-654. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_55. Scopus Book Chapter.
23. Pratik Kumar, Abhishek kalra, Kotni Jyothi Prakash, Deepak Prasad and Vijay Nath (2019), “Study and Design of Obstacle Detection Mechanism”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 661-666 . Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_57. Scopus Book Chapter.
24. Vidushi Goel, Harsh Raj, Kiran Muthigi, S. Sanjay Kumar, Deepak Prasad and Vijay Nath (2019), “Development of Human Detection System for Security and Military Applications”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 195-200. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_18. Scopus Book Chapter.
25. Ankitanshu Swaroop, Abhishek Kumar, SailaabTirkey, Kumari Neelam, Deepak Prasad and Vijay Nath (2019) “Design of Light-Sensing Automatic Headlamps and Taillamps for Automobiles”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering*, vol. 556, pp 301-308. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_28. Scopus Book Chapter.
26. Aditya Kumar and Vijay Nath (2019), “Design of Ultra Low Power CMOS Sigma Delta ADC for Aerospace Applications”, In: Nath V., Mandal J. (eds) *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems, Lecture Notes in Electrical Engineering* vol. 556, pp 171-178. Springer, Singapore, DOI: 10.1007/978-981-13-7091-5\_16. Scopus Book Chapter.

27. Bohra V., Prasad D., Nidhi N., Tiwari A., Nath V. (2019), "Design Strategy for Smart Toll Gate Billing System", In: Nath V., Mandal J. (eds) *Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). Lecture Notes in Electrical Engineering*, vol 476, pp 615-621, Springer, Singapore; [https://doi.org/10.1007/978-981-10-8234-4\\_49](https://doi.org/10.1007/978-981-10-8234-4_49) Online ISBN: 978-981-10-8234-4.Scopus Book Chapter.
28. Razi Q., Nath V. (2019), "Design of Smart Embedded System for Agricultural Update Using Internet of Things", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp372-382 Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_34](https://doi.org/10.1007/978-981-13-0776-8_34) Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
29. Fatma S., Nath V. (2019), "Study and Design of Smart Embedded System for Train Track Monitoring Using IoTs", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 385-395. Springer, Singapore;[https://doi.org/10.1007/978-981-13-0776-8\\_35](https://doi.org/10.1007/978-981-13-0776-8_35), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
30. Kumar A., Nath V. (2019), "Study and Design of Smart Embedded System for Smart City Using Internet of Things", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 397-408, Springer, Singapore;[https://doi.org/10.1007/978-981-13-0776-8\\_36](https://doi.org/10.1007/978-981-13-0776-8_36), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
31. Anand S., Nath V. (2019), "Study and Design of Smart Embedded System for Remote Health Monitoring Using Internet of Things", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp409-414. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_37](https://doi.org/10.1007/978-981-13-0776-8_37), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
32. Kumar C., Nath V. (2019), "Design of Smart Embedded System for Auto Toll Billing System Using IoTs.", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp415-424. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_38](https://doi.org/10.1007/978-981-13-0776-8_38), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
33. Nidhi N., Prasad D., Nath V. (2019), "Different Aspects of Smart Grid: An Overview", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 451-456. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_41](https://doi.org/10.1007/978-981-13-0776-8_41) Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
34. Nidhi N., Prasad D., Nath V. (2019), "A High-Performance Energy-Efficient 75.17 dB Two-Stage Operational Amplifier", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 469-474. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_43](https://doi.org/10.1007/978-981-13-0776-8_43), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.

35. Raj U., Nidhi N., Nath V. (2019), "Automated Toll Plaza Using Barcode-Laser Scanning Technology", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 475-481. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_44](https://doi.org/10.1007/978-981-13-0776-8_44), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
36. Chaudhary S., Prava A., Nidhi N., Nath V. (2019), "Design of All-Terrain Rover Quadcopter for Military Engineering Services", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 507-513. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_47](https://doi.org/10.1007/978-981-13-0776-8_47), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
37. Mohan R., Suraj A.K., Agarawal S., Majumdar S., Nath V. (2019), "Design of Robot Monitoring System for Aviation", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 535-547. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_50](https://doi.org/10.1007/978-981-13-0776-8_50), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
38. Hari Charan E.V.V., Pal I., Sinha A., Baro R.K.R., Nath V. (2019), "Electronic Toll Collection System Using Barcode Technology", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 549-556. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_51](https://doi.org/10.1007/978-981-13-0776-8_51), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
39. Goel V., Riya, Kumari P., Shikha P., Tanushree, Prasad D., Nath V.(2019), "Design of Smartphone Controlled Robot Using Bluetooth", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 557-563. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_52](https://doi.org/10.1007/978-981-13-0776-8_52), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
40. Sinha P.K., Saraiyan S., Ghosh M., Nath V. (2019), "Design of Earthquake Indicator System Using ATmega328p and ADXL335 for Disaster Management", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 565-572. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_53](https://doi.org/10.1007/978-981-13-0776-8_53), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
41. Raju D., Eleswarapu L., Saiv R., Nath V. (2019), "Study and Design of Smart Embedded System for Aviation System: A Review", in: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 573-590. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_54](https://doi.org/10.1007/978-981-13-0776-8_54), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
42. Maurya D.K., Kumar A., Kaunoujiya S., Prasad D., Nath V. (2019), "Study and Design of Smart Industry: A Review", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 591-598.

Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_55](https://doi.org/10.1007/978-981-13-0776-8_55) Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.

43. Sanjay Kumar S., Khalkho A., Agarwal S., Prakash S., Prasad D., Nath V. (2019), "Design of Smart Security Systems for Home Automation", In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 599-604. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_56](https://doi.org/10.1007/978-981-13-0776-8_56), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
44. Goel V., Kumar S., Muralidharan A., Markham N., Prasad D., Nath V. (2019) Auto-Train Track Fault Detection System. In: Nath V., Mandal J. (eds) *Nanoelectronics, Circuits and Communication Systems. Lecture Notes in Electrical Engineering*, vol 511, pp 605-610. Springer, Singapore; [https://doi.org/10.1007/978-981-13-0776-8\\_57](https://doi.org/10.1007/978-981-13-0776-8_57), Online ISBN: 978-981-13-0776-8. Scopus Book Chapter.
45. Singh S, Prasad D., Nath V. (2019), "A 70.8 MW Wideband CMOS Low-Noise Amplifier for WiMAX Application", In: Nath V. & Mandal J.(eds) *Proceedings of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS-2017). Lecture Notes in Electrical Engineering*, vol 476, pp 367-380, Springer, Singapore; [https://doi.org/10.1007/978-981-10-8234-4\\_32](https://doi.org/10.1007/978-981-10-8234-4_32) , Online ISBN: 978-981-10-8234-4.Scopus Book Chapter.
46. Bohra V., Nidhi N.,Singh S, Prasad D. Thakur A., Kumar A., Nath V. (2019), "Design and Implementation of a Reaction Timer Using CMOS Logic", In: Nath V., Mandal J. (eds) *Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). Lecture Notes in Electrical Engineering*, vol 476, pp-533-543, Springer, Singapore;[https://doi.org/10.1007/978-981-10-8234-4\\_43](https://doi.org/10.1007/978-981-10-8234-4_43) Online ISBN: 978-981-10-8234-4.Scopus Book Chapter.
47. Navneet Nayan, Sanjeet Kumar and Sitanshu Sekhar Sahu "Accidental Event Detection Based on Optical Flow Analysis" *Advances in Communication, Devices and Networking, Lecture Notes in Electrical Engineering* vol. 462, pp: 1-8, 2018, Springer, Singapore (ISBN: 978-981-10-7900-9).
48. Yogesh Kumar Sharma and Sanjeet Kumar, "Clusterhead Selection Technique for a Heterogeneous WSN and its Lifetime Enhancement using HETROLEACH Protocol", *Lecture Notes in Electrical Engineering*, vol 453, Springer, Singapore, 2018 (ISBN: 978-981-10-5564-5).