

Faculty Profile

Name: Rana Mukherji

Designation: Faculty Member - Electronics and
Communication Engineering

Teaching Area: Electronic Devices and Circuits
Electrical Sciences-I

Research Interests: Reconfigurable Architectures, Vedic Mathematics,
Design of efficient arithmetic units and
FPGA-based system design.

Education: M.Sc. (Electronics), Devi Ahilya University, Indore, 2002.
M.Tech. (Instrumentation), Panjab University, Chandigarh, 2004.



Professional Experience: (09 Years)

1. Aug 2004- July 2005: Lecturer, INSTITUTE OF TECHNOLOGY AND MGMT , BHILWARA, INDIA.
2. Aug 2005- Mar 2008, Reader, JAIPUR NATIONAL UNIVERSITY, JAIPUR, INDIA.
3. Mar 2008 - July 2012: THE ICFAI UNIVERSITY, DEHRADUN, INDIA.
4. July 2012 to till date: THE ICFAI UNIVERSITY, JAIPUR, INDIA.

Research Publications:

BOOK PUBLISHED (4)

1. Solutions for University of Rajasthan B.Tech. (ECE) Previous years papers(2007), Neelkanth Publication, Jaipur.
2. Manishita Das Mukherji, Rana Mukherji , Amrendra Nath Pathak. Advances in Applied Physical and Chemical Sciences: A sustainable approach" : Book Chapter: Interrelationship amongst pollution status anthropogenic pressure and dwindling avifaunal population of a freshwater village pond : A Case Study . ISBN No. 9789383083725 (2014).
3. Rana Mukherji , Manishita Mukherji, SystemC based Functional Model Refinement , LAP LAMBERT Academic Publishing, Germany. ISBN No.978-3-659-57794-9 (2014).
4. Manishita D. Mukherji, Rana Mukherji , Bench Scale Studies for Sugar Mill Effluent: Case Study on An Indian Sugar Mill, LAP LAMBERT Academic Publishing, Germany. ISBN No.978-3-659-58335-3 (2014).

PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS (18)

1. Rana Mukherji , Avadesh P. Singh, Pankaj Bande, "Design of a Universal Robotic Model And Its Application In Entertainment Robotics", Proceedings of National Conference on Recent Trends in Mechatronics, Nanotechnology and Robotics-2006 , Rourkela, Vol. 1, pp 322-325, 2006
2. Rana Mukherji, Avadesh P. Singh, Puneet Kalia, Shilpa Takkar, A. Agrawal, M. Yadav, "Development of a Wireless Universal Robot and Its Various Applications" , Proceedings of International Conference on Advanced In Electronics & Communication Technology , Nawashaher, Vol. 1, pp 260-263, 2006.
3. Rana Mukherji, Avadesh P. Singh, Puneet Kalia, Shilpa Takkar, A. Agrawal, M. Yadav "Design of a Miniature Mobile Robot" Proceedings of International Conference on Recent Advancements and Applications of Computer in Electrical Engineering , Bikaner, Vol. 1, pp 1258-1260, 2007
4. Rana Mukherji, Avadesh P. Singh, Puneet Kalia, Shilpa Takkar, A. Agrawal, M. Yadav "A Methodology for the SystemC Model Design of Application Specific Instruction Set Processor (ASIP) for Hindi Text-to-Speech Conversion" , Proceedings of International Conference on Systemics, Cybernetics and Informatics, Hyderabad, Vol. 1, pp 633-636, 2007.
5. Rana Mukherji, Avadesh P. Singh, Puneet Kalia, Shilpa Takkar, A. Agrawal, M. Yadav, "Development of an Autonomous Robotic Model ", Proceedings of International Conference on Systemics, Cybernetics and Informatics, Hyderabad Vol. 1, pp 192-194, 2007.
6. T R Choudhary , Rana Mukherji, Amit Chatterjee, "A FPGA-Based Pipelined Distributed Arithmetic Implementation of 2-D Discrete Cosine Transform", Proceedings of National Conference On Architecturing Future IT Systems, Indore, Vol. 1, pp 242-246, 2007

7. Amit Kumar Chatterjee, Rana Mukherji, Shudhashu Tripathi , “An Improved Adaptive Cross Pattern Search (IACPS) Algorithm for Block Motion Estimation in Video Compression”, Proceedings of International Conference on Computational Intelligence and Multimedia Applications- 2007 , Sivakasi, Vol 3, pp 89 – 96, (Also available at IEEE explore Computer Society Library),2007.
8. Rana Mukherji, Puneet Kalia, Ashok Kumar “System Level Design Using SystemC”, Proceedings of NCMDES 09 , Ambala, Vol 1, pp 332-336, 2009.
9. Rana Mukherji, Md. R. Ansari, R.K. Chaurasia, M. Sharma, “JHDL- Towards a New Standard for System Level Design” , Proceedings of National Conference of Emerging Trends in Advanced Computing and Infomatics , Meerut, Vol.1, pp 250-254, 2010 .
10. Rana Mukherji, Md Rashid Ansari, R.K. Chaurasia, Ranjan Mishra, Manishita Das, “Off-Line Hand Written Hindi Character Recognition Using Ant-Miner Algorithm”, National Conference on Revolutionary Advancements in Communication and Electronics(RACE-10), Alwar, Vol.1, pp 49-52, 2010.
11. Nirmal Kumar J.I. , Manishita Das , Rana Mukherji & Rita N. Kumar, "Application of a multivariate technique for analysis of seasonal variations in water quality of a sewage-fed wetland -Khodiyar, Gujarat, India” , Proceedings of National Symposium on Sustainable Development : Issues And Concerns, Vallabh Vidyanagar, Vol.1, pp 5-6, 2011.
12. Manishita Das Mukherji, Nirmal Kumar J.I., Rana Mukherji , Rita N. Kumar & Amrendra Nath Pathak, "Application of Multivariate Technique for assessment of temporal variations in water quality of a fresh water village pond" Proceedings of National Conference on Earth and Environment : Prevention and Pollution organised by Amity Institute for Environmental Toxicology, Safety and Management , Noida, sponsored by Ministry of Earth Sciences, 2014.
13. Vishal Mathur, Rana Mukherji , R.K.Chaurasia , Kananbala Sharma , "Structural Characterization of PS, PMMA and PS/PMMA Polymeric Blend" accepted for publication, Proceedings of 1st International Conference on Innovative Advancements in Engineering and Technology ,Jaipur, March 7 - 8, 2014.
14. Rana Mukherji, R.K.Chaurasia, Vishal Mathur , Manishita Das Mukherji, Puneet Kalia, " Reconfigurable Application Specific Instruction Set Processors - A New Paradigm for Embedded System Design", accepted for publication, Proceedings of 1st International Conference on Innovative Advancements in Engineering and Technology, March 7 - 8, 2014.
15. R.K.Chaurasia, Rana Mukherji, Vishal Mathur, Manishita D.Mukherji, Ranjan Mishra,"Performance Analysis of IEEE 802.11b using different modulation schemes with efficient coding schemes", Proceedings of 1st International Conference on Innovative Advancements in Engineering and Technology, March 7 - 8, 2014.
16. Manishita Das Mukherji, Rana Mukherji, "Influence of anthropogenic activities on water bird communities of a sewage fed wetland: Case Study", Proceedings of National Conference on Science and Engineering (NCSE-2014) , July 27-28, 2014.
17. Himani Solanki, Rana Mukherji, Manishita Das Mukherji, Puneet Kalia, "3D Network-on-chip : A Review", Proceedings of 1st International Conference on Innovative Advancements in Engineering and Technology, March 7 - 8, 2014.
18. Divya Jain, Rana Mukherji, Manishita Das Mukherji, Puneet Kalia, "Nanorobots in Medicine: The Future Revolution in Medical Applications", Proceedings of 1st International Conference on Innovative Advancements in Engineering and Technology, March 7 - 8, 2014.

PAPERS PUBLISHED IN JOURNALS (12)

1. Prajnanam Project Team, S S Mahant Shetti “Euclidean Distance Computation Algorithm for QAM Applications”, VSI- VISION, Vol.1, pp 25-34, 2005.
2. Rana Mukherji, “SystemC-based Design Approach for Modeling Reconfigurable Computing Systems”, The Icfai University Journal of Science and Technology, Vol 4, No.3, pp 30-40, 2008.(Also available at Social Science Research Network e-library, USA).
3. A.P.Singh, A.P.Singh, Rana Mukherji, “India- A Prospective Market for Third Generation (3G) Mobile Technology- A Survey and Analysis”, The Alternative- A Journal of Management Studies and Research of Birla Institute of Technology, Mesra , Vol 8, No. 1, pp 5-33, 2008
4. Rana Mukherji, T R Choudhary , Amit Chatterjee, “An Approach to Implement AMBA APB Timer IP Using SystemC” , Journal of Computer Science and Mathematics, Vol. 1, No. 3, pp 310-318, 2010.
5. Rana Mukherji, T R Choudhary, Amit Kumar Chatterjee, “A FPGA-Based Implementation of an 802.11a Transmitter” , International Journal of Electronics and Communication Engineering, Research India Publication, New Delhi, Vol. 3, No. 1 , pp 351-356, 2010.
6. Nirmal Kumar J.I. , Manishita Das , Rana Mukherji & Rita N. Kumar, “Assessment of hydro-chemical characteristics of a tropical wetland system using Principal Component Analysis: A case study” , IUP Journal of Environmental Sciences , Hyderabad, Vol. 5, No.1, pp 37-50, 2011 (Also available at Social Science Research Network e-library, USA).

7. Nirmal Kumar J.I., Manishita Das , Rana Mukherji & Rita N. Kumar ,“Assessment of Heavy Metal Pollution in Macrophytes, Water and Sediment of a Tropical Wetland System Using Hierarchical Cluster Analysis Technique” , accepted for publication, Journal of International Environmental Application & Science, Turkey, Vol. 6 , No.1,pp 149-156 ,2011.
8. Rana Mukherji, Amit Kumar Chatterjee & Manishita Das, “Implementation of an Efficient Multiplier Architecture Based on Ancient Indian Vedic Mathematics using SystemC” , KIST Journal of Science and Technology, Rawanda, Africa, Vol. 1, No. 1, pp 39-43, 2011.
9. Nirmal Kumar J.I. , Manishita Das , Rana Mukherji & Rita N. Kumar , “Assessment of zooplankton diversity of a tropical wetland system”, International Journal of Pharmacy & Life Sciences, India , Vol. 2, No. 8, pp 983-990,2011.
10. Nirmal Kumar J.I. , Manishita Das , Rana Mukherji & Rita N. Kumar , “Heavy Metal Contamination of Selected Aquatic Macrophytes in Two Distinct Seasons: A Case Study of Varasda Wetland,Gujarat, India”, Turkish Journal of Science and Technology, Turkey, Vol. 7, No. 1, pp 7-17, 2012.
11. Rana Mukherji, Manishita Das, “System Level Modeling Methodology of Application Specific Instruction Set Processor (ASIP) Using SystemC” , DIU - Journal of Science and Technology, Dhaka, Bangladesh, Vol. 7, No. 1, pp 44-49, 2012.
12. Nirmal Kumar J.I. , Manishita Das , Rana Mukherji & Rita N. Kumar,” Trace Metal Contents in Water, Sediment and Hydrophytes at a Freshwater Wetland in Central Gujarat, India”, Bulletin of Environmental and Scientific Research, United Kingdom, Vol. 1, No. 1, pp16-24, 2012 .

Editorial/Review Board Member of Journals/Conferences: EDITORIAL BOARD MEMBER OF JOURNALS

1. The International Journal of Emerging Technology and Advanced Engineering, India
2. International Journal of Computer & Electronics Research, India
3. International Journal of Computer Technology and Electronics Engineering, India
4. International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering , India
5. BioIT International Journals , India
6. i-manager - Journal on Electronics Engineering, India
7. International Journal of Scientific Computing ,India
8. Current Research in Engineering Science and Technology (CREST) Journals, India
9. HCTL - International Journal of Technology Innovations and Research, India
10. International Journal of Advanced Technology & Engineering Research, India
11. SCI Publication - International Journal of Advance Research Publishing , India
12. GSTF Journal of Engineering Technology , Singapore
13. International Journal of Engineering and Applied Sciences (IJEAS), , Turkey
14. International Journals of Engineering & Sciences (Impact Factor 0.4245), Pakistan
15. International Journal of Physical, Pure and Applied Sciences,UK
16. International Journal on Information Technology (IREIT), USA
17. International Journal of Applied Science and Engineering Research (IJASER), USA
18. Journal of Applied and Industrial Sciences, USA

REVIEW BOARD MEMBER OF JOURNALS

19. Journal of Computer Science and Technology, Argentina
20. International Journal of Computing and Digital Systems, Bahrain
21. Journal of Technology for Education and Learning, Canada
22. Journal of Computer Science and Technology (Springer) (Impact Factor 0.656), China
23. Journal - Engineering, Technology & Applied Science Research (ETASR), Greece
24. SDIWC International Journal of New Computer Architectures and Their Applications (IJNCAA), Hong Kong
25. International Journal of Engineering Research and Technology, India
26. Transstellar-International Journal of Mathematics and Computer Applications Research(Impact Factor 2.0534), India
27. International Journal of Computer Science and Technology (Impact Factor 5.09), India
28. International Journal of Research in Computer Engineering & Electronics, India
29. International Journal of Computer Technology and Applications, India
30. International Magazine on Advances in Computer Science and Telecommunications, Republic of Macedonia

31. Technical Journal of Engineering and Applied Sciences, Turkey
32. Journals of World Science Publisher, USA
33. International Journal of Advancements in Research & Technology, USA
34. International Journal of Computer Science and Information Security (IJCSIS), USA
35. International Journal of Electronics and Electrical Engineering(Engineering and Technology Publishing),USA
36. International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies (ITJEMAST), USA (Volunteered Reviewer)
37. International Journal of Scientific & Engineering Research, Houston, USA
38. International Journal of Advancements in Computer Science & Information Technology, USA
39. The Open Electrical & Electronic Engineering Journal(Impact Factor 0.1031), USA
40. International Journal of Engineering Intelligent Systems, Leicester, UK

REVIEW BOARD MEMBER OF CONFERENCES

41. The First International Conference on Green Computing, Technology and Innovation (ICGCTI2013), , held on March 4-6, 2013 at The Asia Pacific University of Technology and Innovations, Kuala Lumpur, Malaysia.
42. The International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECE2013), held on May 9-11, 2013 at Mevlana University, Konya, Turkey.
43. The Second International Conference on Informatics & Applications -2013 (ICIA- 2013) (organized by IEEE Poland Section) to be held on Sept. 23-25, 2013 at Technical University of Lodz, Poland.
44. The International Conference on Digital Information Processing, E-Business and Cloud Computing (DIPECC 2013)to be held on on October 23-25, 2013 at Islamic Azad University, UAE Branch, Academic City Campus, Dubai, UAE .
45. The Second International Conference on Informatics & Applications -2013 (ICIA- 2013) to be held, on Nov. 12-14, 2013 at Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia.
46. The International Conference on Electrical and Electronics Engineering, Clean Energy and Green Computing (EEECEGC 2013), to be held on December 11-13, 2013at Islamic Azad University, UAE Branch, Academic City Campus, Dubai, UAE .
47. The Second International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECE2014)to be held onon March 18-20, 2014, in Asia Pacific University of Technology and Innovation (APU), Kuala Lumpur, Malaysia .
48. The International Conference on Computing Technology and Information Management (ICCTIM2014) ,to be held on April 10-12, 2014 at Islamic Azad University, UAE Branch, Academic City Campus, Dubai, UAE .

Professional Memberships:

1. World SystemC Community, LA, USA
2. Educational Consultants of India Ltd, INDIA
3. British Science Association, UK
4. International Association of Engineers(IAENG), Hong Kong
5. The Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (ICSSITE), Belgium
6. The Science and Engineering Institute (SCIEI) , USA.
7. The Society of Digital Information and Wireless Communications, USA
8. International Association of Computer Science and Information Technology (IACSIT), Singapore
9. The Science and Information Organization, USA
10. The International Association of Engineers and Scientists (IAEST) , USA
11. The Internet Society(ISOC), USA
12. International Society for Environmental Information Sciences, Canada