



Name: UMESH DUTTA

Designation: Associate Professor & Director MRIIC

Education:

Ph.D from Manav Rachna International Institute of Research and Studies, Faridabad.

M.Tech in VLSI Design and Embedded Systems, Manav Rachna International University, India, 2012.

B.E in Electronics & Communication Engineering, M.D.U Rohtak, India, 2010.

Experience: 7 years

Area of Expertise: VLSI Design & Embedded Systems

Software Skills:

Keil, Proteus, Mikro C, XILINX, MATLAB, IAR Embedded Workbench, Tanner Tool, PSPICE, HSPICE, MicroWind Tool, IE3D, Code Composer Studio, Energia, Atmel Studio, Arduino IDE, Android Studio, LabView, TCAD, Symica DE.

List of Publications:

2018:

Umesh Dutta, M.K.Soni, Manisha Pattanaik, "Design and Analysis of Tunnel FET for Low Power High Performance Applications", International Journal of Modern Education and Computer Science(IJMECS), Vol.10, No.1, pp. 65-73, 2018.DOI: 10.5815/ijmeecs.2018.01.07

<http://www.meecs-press.org/ijmeecs/ijmeecs-v10-n1/v10n1-7.html>

2017:

Shikha Rai, Umesh Dutta, " Process Variation Aware FINFET based Digital Circuits Design", Current Trends in Technology and Science, ISSN: 2279-0535. Volume: VI, Issue: V-SEP 2017, Page No: 747-751.

<http://www.ctts.in/issuedetail.php?id=330>

2016:

Umesh Dutta, M.K Soni, Manisha Pattanaik,"A Review of NBTI Degradation and its Impact on the Performance of SRAM", International Journal of Modern Education and Computer Science (IJMECS), Vol.8, No.6, pp.57-65, 2016.DOI: 10.5815/ijmeecs.2016.06.08

<http://www.mecs-press.net/ijmeecs/ijmeecs-v8-n6/v8n6-8.html>

Ashish Sharma , Umesh Dutta , Sneha Arora , Vipin Kumar Sharma , " Design & Optimization of CNTFET based Domino 1- Bit ALU ", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 5, Issue 5, May 2016 , pp.125-131, DOI: 10.17148/IJARCCCE.2016.5531.

<https://www.ijarcce.com/upload/2016/may-16/IJARCCCE%2031.pdf>

Ashish Sharma , Umesh Dutta , Sneha Arora," Comparative Analysis of Performance of CNTFET Based Static & Domino Logic ALU", International Journal of Innovative Research in Computer and Communication Engineering, Vol. 4, Special Issue 4, August 2016 , pp.47-54.

http://www.ijircce.com/upload/2016/etiete/8_ashish.pdf

Akshay Angaria, Umesh Dutta, Sneha Arora," Design & Optimization of FINFET Based Domino Logic Circuit", International Journal of Technical Research and Applications, Volume 4, Issue 4, July-Aug 2016, pp.19-26.

<https://www.ijtra.com/view/design-optimization-of-finfet-based-domino-logic-circuit.pdf?paper=design-optimization-of-finfet-based-domino-logic-circuit.pdf>

Rahil Kumar, Kanika Sharma, Umesh Dutta," Design of Arithmetic and Logical Unit (ALU) Using FinFET", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 5, Issue 5, May 2016, pp.3608-3617.

http://www.ijareeie.com/upload/2016/may/24_DESIGN.pdf

2015:

A. Kathuria, A. Aggarwal, A. Bali and U. Dutta, "A novel approach for microcontroller based quality assesment system," 2015 International Conference on Soft Computing Techniques and Implementations (ICSCIT), Faridabad, 2015, pp. 192-195. Doi: 10.1109/ICSCIT.2015.7489592

<https://ieeexplore.ieee.org/abstract/document/7489592/>

Kirti Karan, Umesh Dutta, " A Design Technique To Reduce Nbti Effects From 5t Sram Cells", Int. Journal of Engineering Research and Applications, ISSN: 2248-9622, Vol. 5, Issue 6, (Part - 3) June 2015, pp.81-85.

http://www.ijera.com/papers/Vol5_issue6/Part%20-%203/M56038185.pdf

Vikas Sharma, Umesh Dutta, " Designing of Low Power CNTFET Based D Flip-Flop Using Forced Stack Technique", Int. Journal of Engineering Research and Applications, ISSN : 2248-9622, Vol. 5, Issue 4, (Part -6) April 2015, pp.77-81.

http://www.ijera.com/papers/Vol5_issue4/Part%20-%206/L504067781.pdf

Vipin Kumar Sharma, Umesh Dutta, Sneha Arora, R.P. Sharma, " Ground Bounce Noise Reduction in Vlsi Circuits", Int. Journal of Engineering Research and Applications, ISSN: 2248-9622, Vol. 5, Issue 12, (Part - 1) December 2015, pp.71-76.

http://www.ijera.com/papers/Vol5_issue12/Part%20-%201/L512017176.pdf

Sneha Arora, Umesh Dutta, Vipin Kumar Sharma, " A Noise Tolerant and Low Power Dynamic Logic Circuit Using Finfet Technology", Int. Journal of Engineering Research and Applications, ISSN: 2248-9622, Vol. 5, Issue 12, (Part - 1) December 2015, pp.51-56.

http://www.ijera.com/papers/Vol5_issue12/Part%20-%201/H512015156.pdf

2014:

Neeharika, Umesh Dutta, " Comparative Study of Area & Power Consumption Among Various Srams", International Journal of Scientific Research, Volume: 3, Issue: 6, June 2014, ISSN No 2277 - 8179, pp.35-39.

[https://www.worldwidejournals.com/international-journal-of-scientific-research-\(IJSR\)/file.php?val=June_2014_1401968371_db524_185.pdf](https://www.worldwidejournals.com/international-journal-of-scientific-research-(IJSR)/file.php?val=June_2014_1401968371_db524_185.pdf)

Prerna Kakkar, Umesh Dutta," A Novel Approach to Recognition of English Characters Using Artificial Neural Network", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 3, Issue 6, June 2014, pp.10238-10245.

http://www.ijareeie.com/upload/2014/june/33_ANovel.pdf

2013:

Bipin Pokharel, Priya Gupta, Umesh Dutta," Designing CNTFET and Force Stacking CNTFET Inverter for the Analysis of Average Power and PDP at Different Low Supply Voltage", International Journal of Engineering Research and Applications, ISSN: 2248-9622, Vol. 3, Issue 4, Jul-Aug 2013, pp.1845-1855.

<https://pdfs.semanticscholar.org/6488/abd9aaa8a399d60b36c6d0416597ea8e0838.pdf>

2012:

Naresh Kumar, Umesh Dutta and Dileep Kumar Naresh Kumar," Design of Low Voltage and Low Power D-Flip Flop", International Journal of Scientific Engineering and Technology, ISSN: 2277-1581, 01 July 2012, Volume No.1, Issue No.3, pg: 184-186.

<https://pdfs.semanticscholar.org/450c/21fbc3c1f4e99d91735ca3697f64bf760b97.pdf>

Umesh Dutta, Pankaj Kumar, Naresh Kumar," Noise Tolerance Enhancement with Leakage Current Reduction in Dynamic Logic Circuits", International Journal of Scientific Engineering and Technology, ISSN: 2277-1581, 01 July 2012, Volume No.1, Issue No.3, pg: 137-142.

<https://pdfs.semanticscholar.org/982d/07aeeb3ae367d91b6e2c0076c0fdd04b946f.pdf>

Gyan Prakash, Umesh Dutta, Mohd. Tauheed Khan," Dynamic Power Reduction in SRAM", International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622, Vol. 2, Issue 5, September- October 2012, pp.1781-1784.

<https://pdfs.semanticscholar.org/1668/21dcd18b9b11631aa8be90e56b59dafc4b60.pdf>

Shruti Vashist, Umesh Dutta, M.K.Soni," Design and Performance Analysis of Rotman Lens", International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622, Vol. 2, Issue4, July-August 2012, pp.1792-1795.

http://www.ijera.com/papers/Vol2_issue4/KO2417921795.pdf

International Conferences, Forums and Events Attended:

Mr. Umesh Dutta, Assistant Professor and Deputy Director, MRIIC visited Kazan, Russia to represent Manav Rachna Educational Institutions at Science of the Future Conference in September 2016.

Mr. Umesh Dutta, Assistant Professor and Deputy Director, MRIIC visited Angers, France to represent Manav Rachna Educational Institutions at World Electronics Forum 2017.

Mr. Umesh Dutta, Assistant Professor and Deputy Director, MRIIC visited Paris, France to represent Manav Rachna Educational Institutions at CES Unveiled 2017 event.

Mr. Umesh Dutta, Assistant Professor and Deputy Director, MRIIC visited Dubai, UAE to represent Manav Rachna Educational Institutions at Living Talent Master Piece 2017 event.

National Level Workshops Attended:

NETRA Workshop at KLE Tech, Hubli, Karnataka -29th Nov-2nd December 2017

Embedded Systems & IoT Workshop by Oxford University Press, India-13th May

2017 Industry 4.0 Workshop at PHD Chambers, New Delhi- 28th June 2017

IESA PVSYST Workshop Techtronics-8th December 2017, India Habitat Centre, New Delhi

Intel Academic Forum 2015- 8th-9th October 2015, New Delhi

Workshop on Electric Vehicles at SVNIT Surat- 26th to 30th may 2014

National Instruments Lab View workshop, Gurgaon- 4th June, 2014

Guest Speaker:

National Cyber Security Conference 2018: Lecture on “IoT Security”- 07th-09th March 2018, conducted by Intersquad Cyber Intelligence at Manav Rachna.

Lecture on “Internet of Things” at IIMT College of Engineering, Ghaziabad: 21st May -25th May 2018 during FDP (TEQIP-III), sponsored by Dr.A.P.J Abdul Kalam Technical University, Lucknow, U.P.

Russian Centre of Science and Culture New Delhi: Lecture on “Contribution of Indian Scientists to the World” 14th March 2018 at RCSC, New Delhi.

Russian Centre of Science and Culture New Delhi: Lecture on “RECALLING SPACE FEAT OF VALENETINA TERESHKOVA”20th June 2018 at RCSC, New Delhi.

Short term training Programs/Design Contests Conducted in Association with Industry:

Intel IOT workshop, September 2016-conducted in association with FICE Bangalore

Atmel Professor Summit, June 2015-conducted in association with Atmel India Pvt. Ltd.

Texas Instruments Analog Maker Competition, 20th January 2015 to 20th Feb 2015- conducted in association with EdGate Technologies Bangalore under Texas Instruments University Program

Texas Instrument DrishTI online contest, 04th August 2017- conducted in association with EdGate Technologies Bangalore under Texas Instruments University Program

Ongoing Research Projects:**Partner Organization: Cogenda Singapore**

TCAD Simulation and Analysis of Si - and Hetro Junction Gate All Around (GAA) Tunnel-FET .

TCAD Simulation and Analysis of ultra Thin Junction less FINFET Devices.

Design and Optimization of Gate All Around Si Nano wire MOSFET.

Design and Analysis of SRAM using FINFET technology.

Design and implementation of 4bit Analog to Digital Converter using Threshold Inverter Quantization method in Symica DE.

Consultancy Projects Completed:

Project Title: Wi-Fi Controlled Digital Door Lock

Year: 2015

Sponsoring Agency: Magnum Group (Samsung), New Delhi

Amount: Rs.25,000/-

Project Title: Wi-Fi Controlled Digital Door Lock

Year: 2015

Sponsoring Agency: Magnum Group (Samsung), New Delhi

Amount: Rs.25,000/-

Project Title: Automatic Drink Dispensing Machine

Year: 2017

Sponsoring Agency: Adelantos Technologies Pvt. Ltd. New Delhi

Amount: Rs.78,000/-

Ongoing Consultancy Project:

Project Title: Smart Drink Dispensing Machine

Year: 2018

Sponsoring Agency: Adelantos Technologies Pvt. Ltd. New Delhi

Amount: Rs.2,90,000/-

Blog:

umeshdutta.blogspot.in

Online Videos:

<https://www.youtube.com/watch?v=kgz94fOTwxs>

<https://youtu.be/Tkcxn1xihdg>

<https://youtu.be/gZTF5VlosHI>

<https://youtu.be/IOKem4kjU8I>

<https://youtu.be/9YjyIG9f5Pg>

<https://youtu.be/KFKIBacw8Ts>

<https://youtu.be/IZfLlJaFOOE>

https://youtu.be/VKI_ZLDwFKE

<https://youtu.be/CMWgCxThHDI>