



## MANAV RACHNA UNIVERSITY, FARIDABAD

Sector 43, Aravalli Hills, Manav Rachna Campus Rd, Faridabad, Haryana 121004

### Dr. Shruti Vashist

**Designation:** Professor and Head

**Qualifications :** Ph.D.(Electronics and Communication Engineering)

**Email :** deanstudents@mru.edu.in

**Experience:** 22 Years

<https://scholar.google.com/citations?user=7U7tRzcAAAAJ&hl=en>



**Research Interest :** Wireless & Mobile Communication , Microstrip Antenna, Semiconductor Devices

#### + Journal Publication Details:

K. Deepa,Zaheeruddin,Shruti Vashist, 'Energy-efficient density-based Fuzzy C-means clustering in WSN for smart grids', published in Australian Journal of Multi-Disciplinary Engineering,Taylor & Francis Online. Volume 38, Issue 3 September 2020 , pp 181-187<https://www.tandfonline.com/doi/full/10.1080/14488388.2020.1811454>

Deepa Kalaimani ,Zaheeruddin Zah &Shruti Vashist MDRP: An Energy-Efficient Multi-Disjoint Routing protocol in WSNs for Smart Grids,INTERNATIONAL JOURNAL ON SMART SENSING AND INTELLIGENT SYSTEMS Article | DOI: 10.21307/ijssis-2020-016 Issue 1 | Vol. 13 (2020),March 4<sup>th</sup> 2020

A State-of-the-Art Study on Energy Harvesting Systems: Models and Issues Rahul Yadav, Ayush Goel,Shruti Vashist and Mohit Verma,Indian Journal of Science and Technology, Vol 12(41), DOI: 10.17485/ijst/2019/v12i41/145572, November 2019  
<https://sciresol.s3.us-east-2.amazonaws.com/IJST/Articles/2019/Issue-41/Article7.pdf>

The Qualitative Study on Input – Output Channel Configurations in Wireless Body Area Network SavitaSindhu·ShrutiVashist,V.R.Singh·Amit KumarTyagi  
<https://doi.org/10.1016/j.procs.2020.01.022>INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ADVANCED COMPUTING 2019, ICRTAC 2019Available online at [www.sciencedirect.co](http://www.sciencedirect.co)

Evaluation of Non-Orthogonal Techniques for Advance Wireless System  
Dipa Nitin Kokane, Geeta Nijhawan, Shruti Vashist,International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-2, July 2019

Design of E-shaped and Circular Array Antenna to Improve the Performance for WLAN and WiMax Network, Poonam Ghanghas, Shruti Vashist2 Jour of Adv Research in Dynamical & Control Systems, Vol. 11, 04-Special Issue, 2019

A PSO Based Antenna Array Optimization For Wimax And WLAN Application,Poonam Ghanghas, Shruti Vashist2 Jour of Adv Research in Dynamical & Control Systems, Vol. 10, 07-Special Issue, 2018

Location based protocols in WSN: A Review, IIOAB Engineering Technology, ISSN: 0976-3104, Vaishali Mittal , Snigdha Pokhriyal , Harshita Srivastava , Shruti Vashist, Mohit Verma,Vol 9,May 2018. [review - The IIOAB Journal](#)

Wireless Body Area Networks Mitigation method using Equalization, World Academy of Science Engineering and Technology, International journal of computer and Information Engineering ,ISSN:2279-0764, Savita Sindhu and Shruti Vashist,Vol 11,No.7,Pg.930-937,July 2017,  
<http://dx.doi.org/10.14738/jbemi.43.3169>

Diversity techniques in Wireless Body Area Network, International Journal of Engineering and Technology (IJET) Scopus Indexed, ISSN: 2227-524X,Savita Sindhu and Shruti Vashist Vol 9,No.3,Pg 2111-2118,July 2017. <http://www.enggjournals.com/ijet/docs/IJET17-09-03-169.pdf>

A Robust Approach for Medical Image Enhancement using DTCWT, International Journal of Computer Applications , Gagandeep ,Shruti Vashist, Vol 167,No.6,Pg-26-29,June 2017.

<p><a href="http://www.ijcaonline.org/archives/volume167/number6/kaur-2017-ijca-914316.pdf">www.ijcaonline.org/archives/volume167/number6/kaur-2017-ijca-914316.pdf</a></p> <p>Comparative Study of Medical Image Contrast Enhancement using Discrete Wavelet Transform and Dual Tree Complex Wavelet Transform, Journal of Biomedical Engg and Medical Imaging, Gagandeep, Shruti Vashist Vol 4, Issue 2, pg 105-114, April 2017  <a href="http://scholarpublishing.org/index.php/JBEMi/article/view/3109">http://scholarpublishing.org/index.php/JBEMi/article/view/3109</a></p>
<p>Design and Implementation of WBAN, Journal of Biomedical Engineering and Medical Imaging, Savita Sindhu and Shruti Vashist, Vol 4 No.1, PP-13-20, February 2017  <a href="https://pdfs.semanticscholar.org/27ef/267269ac99af2bf933612a8f6dfa835b0e9e.pdf">https://pdfs.semanticscholar.org/27ef/267269ac99af2bf933612a8f6dfa835b0e9e.pdf</a></p>
<p>Performance of DCO-OFDM in Optical Wireless Communication System, International Journal of Innovative Research in Advanced Engineering (IJIRAE) ISSN: 2349-2763, Sakshi Verma, Shruti Vashist, Issue 6, Vol 3, June 2016. <a href="https://www.scribd.com/document/317130717/Performance-of-DCO-OFDM-in-Optical-Wireless-Communication-System">https://www.scribd.com/document/317130717/Performance-of-DCO-OFDM-in-Optical-Wireless-Communication-System</a></p>
<p>A Review on Wireless Body Area Network (WBAN) for Health Monitoring System: Implementation Protocols, Savita Sindhu, Shruti Vashist and S K Chakarvarti, Communications on Applied Electronics, Published by Foundation of Computer Science (FCS), NY, USA, 4(7):16-20, March 2016. <a href="http://www.caeaccess.org/research/volume4/number7/sindhu-2016-cae-652130.pdf">http://www.caeaccess.org/research/volume4/number7/sindhu-2016-cae-652130.pdf</a></p>
<p>A Review on the Development of Rotman Lens Antenna, Chinese Journal of Engineering, Shruti Vashist, M.K.Soni, Pramod Singhal, Volume 2014, Article ID 385385, July 2014  <a href="http://www.hindawi.com/journals/cje/2014/385385/">http://www.hindawi.com/journals/cje/2014/385385/</a></p>
<p>Design and Performance Analysis of Wide angle Microwave Lens for Wireless Communication, Shruti Vashist, M.K.Soni, Pramod Singal, International Journal of Computer Applications, 0975 – 888, Volume 85 – No 12, January 2014 .  <a href="http://research.ijcaonline.org/volume85/number12/pxc3893364.pdf">http://research.ijcaonline.org/volume85/number12/pxc3893364.pdf</a></p>
<p>Rotman Lens Performance Analysis, Shruti Vashist, M.K.Soni, Pramod Singal, ACEEE Int. Journal of Image Processing, 2152-5056, Vol. 5, No. 1, January 2014.  <a href="https://archive.org/stream/indexing_theides_1534/1534_djvu.txt">https://archive.org/stream/indexing_theides_1534/1534_djvu.txt</a></p>
<p>Optimization of Rectangular Patch Antenna, International Journal of Multidisciplinary Consortium, Anjali Singh, Shruti Vashist, Volume 1, Issue 1, pp.1-11, July 2014,  <a href="http://ijmc.rtmonline.in/vol1iss1/043020.pdf">http://ijmc.rtmonline.in/vol1iss1/043020.pdf</a></p>
<p>Study of Wireless Sensor Network Using LEACH Protocol, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Himashi, Shruti Vashist, Vol 3, Issue 2, July 2013  <a href="http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.677.9939&amp;rep=rep1&amp;type=pdf">http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.677.9939&amp;rep=rep1&amp;type=pdf</a></p>
<p>Design of a Square Microstrip Patch Antenna International Journal of Innovative Technology and Exploring Engineering (IJITEE), Shruti Vashist, M.K.Soni, Pramod Singal, ISSN: 2278-3075, Volume-1, Issue-1, June 2012. <a href="http://www.oalib.com/paper/2181414">http://www.oalib.com/paper/2181414</a></p>
<p>Genetic Approach in Patch Antenna Design, International Journal of Emerging Science and Engineering (IJESE), 2319-6378, pp.75-76, July 2013 Volume-1, Issue-9. Shruti Vashist, M.K.Soni, Pramod Singal. <a href="http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.678.8690">http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.678.8690</a></p>
<p>Design And Performance Analysis Of Rotman Lens, International Journal of Engineering Research and Applications (IJERA), Shruti Vashist, Umesh Dutta, Dr.M.K.Soni, ISSN: 2248-9622 www.ijera.com Vol. 2, Issue4, July-August 2012, pp.1792-1795 .  <a href="http://www.ijera.com/papers/Vol2_issue4/KO2417921795.pdf">http://www.ijera.com/papers/Vol2_issue4/KO2417921795.pdf</a></p>
<p>Analysis of Microstrip Antenna Array, IJMER, Shruti Vashist, M.K.Soni, Pramod Singal, vol2, issue 6, Nov-Dec 2012. <a href="http://www.ijmer.com/papers/Vol2_Issue6/FI2647544756.pdf">http://www.ijmer.com/papers/Vol2_Issue6/FI2647544756.pdf</a></p>
<p>Selection of Antenna for Wireless Communication Systems, Manav Rachna International Journal Ms. Shruti Vashist, Dr.M.K.Soni, June 2011</p>
<p><b>+ Conference Publications:</b></p>
<p>Singh, P. L., Sindhwani, R., Vashist, S., Kumar, R., Sharma, B.P. &amp; Gupta, T. (2021). Modelling and Analysis of Barriers to implement Online Education in India. 6th International Conference on Advanced Production &amp; Industrial Engineering (ICAPIE-2021), Delhi Technical University, Delhi, 18-19 June, 2021. Mechanical Engineering, Springer, Singapore.)</p>
<p>Singh, P. L., Sindhwani, R., Vashist, S., Kumar, R., Kumar, R. &amp; Modi, P.A. (2021). Modelling the interrelationship among the influential factors affecting COVID-19 for stopping the chain transmission. . 6th International Conference on Advanced Production &amp; Industrial Engineering (ICAPIE-2021), Delhi</p>

Technical University, Delhi, 18-19 June, 2021. (Paper is in process of publishing in Lecture Notes in Mechanical Engineering, Springer, Singapore.)
Power Allocation Optimization for Non Orthogonal Multiple Access, ICRASET 2020,4-5 September, 2020 at BVM.Dipa kokane shruti Vashist and Geeta Nihawan
Dual Band printed slot antenna for the 5G wireless communication network, Nitin Kathuria and Dr.Shruti Vashist, in 2016 International conference on wireless communication, signal processing and networking(WISPNET) 978-1-4673-9338-6/16/\$31.00©2016 IEEE,pg.1864-1860,March 2016 <a href="http://dl.acm.org/citation.cfm?id=3004964">http://dl.acm.org/citation.cfm?id=3004964</a>
A novel compact dual band UWB antenna, Nitin Kathuria and Dr.Shruti Vashist,in 2016 International conference on wireless communication, signal processing and networking(WISPNET) 978-1-4673-9338-6/16/\$31.00©2016 IEEE,pg.1888-1890,March 2016.
Design of Rotman Lens Antenna using GA,Shruti Vashist,M.K.Soni,P.K.Singhal, National Conference on Recent Trends in Microwave Engineering 2015
Dual band Microstrip Patch antenna ,Shruti Vashist,Sunita Virmani,Monika,Commune Conference on Advancements in Communication and Computing System, Gautam Buddh University Greater Noida,2012
Broad Band Microstrip Patch antenna ,Shruti Vashist,Monika ,National Conferenec on Future Mobile Systems Sept 2011.
High Gain Microstrip Patch antenna, Shruti Vashist, Monika, Commune at ICT ,Gautam Buddh University ,2011.
Wide Band Inco Rec Shaped Patch antenna,Shruti Vashist,Geeta Nijhawan,D.S.Gotra,Vimlesh Singh,National Conference on ECE ,MITS,Gwalior,2010

**+ Research Supervised(PhD):**

K.Deepa on "Routing in Smart Grids" Year March 2021(Completed)
Poonam Ghangas on "Design and Optimization of Microstrip Antenna Array" Year Nov 2020 (Completed).
Savita Rangi on "Framework for Energy Efficient Clustering Approach for Wireless Sensor Networks" Year - Jan 2019 (Completed)

**+ Book/Chapter Publications:**

Chapter in the book on Blockchain Technology and the Internet of Things,Challenges and Applications in Bitcoin and Security <b>Introduction to Blockchain Technology</b> Geeta Nijhawan, Shruti Vashist, Anita Khosla, and Siddharth Sagar Nijhawan ( <a href="https://www.appleacademicpress.com/blockchain-technology-and-the-internet-of-things-challenges-and-applications-in-bitcoin-and-security/9781771888974">https://www.appleacademicpress.com/blockchain-technology-and-the-internet-of-things-challenges-and-applications-in-bitcoin-and-security/9781771888974</a> )
Electronic Devices and Circuits ;Manav Rachna Publications
Elements of Electronics Engineering ;Manav Rachna Publications
Analog Electronic Circuits ;Manav Rachna Publications

**+ Administrative Responsibilities:**

Dean Students Welfare
Head of the Department
Chairman DRC
Chairman BOS
Member BOF
Chairman ICC
Member -Committee for Admissions for the seats reserved for Haryana Domicile Students
Member-Executive Committee Red Cross Activities
Member-Institutional Grievance Redressal Committee
Member-Institution for Science and Technology
Chairperson -University Committee and Equal Opportunity Cell

**+ Professional Affiliation:**

Life member of The Indian Society for technical education (LM 115857)

Member of The Institution of Engineers, Calcutta (F-1228265)

**+ Expert Talk Delivered**

Invited as speaker in FDP on Recent trends and Innovation in Electronics Engineering on "Design Thinking " on 8<sup>th</sup> August 2020 at IIMT College of Engg Greater Noida .

**+ Event Organized(Conference/Seminar/FDP/Workshops**

Organizing member of 'International Conference on Soft Computing Techniques and Implementations' held during 8th till 10th October 2015. The Conference was technically supported by IEEE and ISI Kolkata

Organized and participated Workshop on 'Network Implementation and Security' at MRIU, FET on 1<sup>st</sup> June 2013

Member organizing committee of One day Workshop on IPR: Awareness and Government Initiatives, sponsored by Department of Electronics and Information Technology (DeitY), Ministry of Communications & IT, Government of India on 17<sup>th</sup> JUNE 2015

**+ Awards**

Awarded best faculty in 2004

Certificate of Appreciation for 10 yrs of service in MREI