Dr. Prateek Raj Gautam

Ph.D., Electronics and Communication Engineering,
Motilal Nehru National Institute of Technology Allahabad

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ORCID:0000-0002-2889-4275, PUBLONS:I-9311-2017, IEEE:91250146, SCHOLAR:slZHj6cAAAAJ

Education

Ph. D. *2016–2021*
Electronic & Communication Engineering *(Wireless Sensor Networks)*, ***Motilal Nehru National Institute of Technology Allahabad, Prayagraj (UP), India***, with CPI of 7.25. Thesis Title: "*Energy Efficient 2D and 3D Localization in Wireless Sensor Networks using Single Anchor Node*".

M. Tech. *2009–2011*
Electronic & Communication Engineering, ***Harcourt Butler Technological Institute (HBTI) Kanpur (UP), India***, with an aggregate of 67.55%. Thesis Title: "*Generalized One Dimentional Optical Orthogonal Coding Scheme for CDMA Systems with its Grouping and Performance Analysis*".

B. Tech. *2004–2008*
Electronics & Communication Engineering, ***University Institute of Engineering and Technology (UIET), CSJMU Kanpur (UP), India***, with an aggregate of 62.00%.

12 (AISSCE) *2004*
Mathematics, Biology, Physics, Chemistry, and English; ***Kendriya Vidyalaya (CBSE)***, with an aggregate of 58.40%.

10 (AISSE) *2002*
Mathematics, Science, Social Studies, Hindi, and English; ***Kendriya Vidyalaya (CBSE)***, with an aggregate of 67.40%.

Research Interests

Wireless Sensor Networks (WSNs), Energy efficient WSN Localization,
Wireless Communication, CDMA, IDMA, Brain Wave Mapping

Computer Skills

• **MATLAB**, • **LabVIEW**, • **LTspice**, • **Arduino IDE/PlatformIO**, • **CST Studio**, • **KiCAD**,
• **LaTeX** (pgfplots/tikz/beamer), • **Gnuplot**, • **Word/Excel, LibreOffice**,
• Photoshop/Corel Draw/Inkscape/GIMP, • **Blender**,
• **Github**, • **Web design**: Github pages, Jekyll, hosting and server management, **WordPress**, *(Designed and hosted conference (vcas2018) website at MNNIT ECED, online at mnnit.ac.in/vcas2018)*,
• **Python** (tkinter/kivy) *(Designed GUI based hotspot software online at fwh.mgeek.in)*, *(Form filler software online at formhelper.mgeek.in)*,and • **Linux**, Terminal, and Windows.

Work Experience

Assistant Professor *June 2012 – July 2013*
ECED, *Naraina College of Engineering and Technology, Kanpur, UP.*
Assistant Professor *July 2013 – December 2015*
ECED, *Allehnouse Institute of Technology, Kanpur, UP.*

Publications Journal(J) Conference(C)

[J1] **P. R. Gautam**, S. Kumar, A. Verma, T. Rashid, *et al.*, "Energy-efficient localization of sensor nodes in WSNs using beacons from rotating directional antenna," *IEEE Transactions on Industrial Informatics*, vol. 15, no. 11, pp. 5827–5836, Nov. 2019. DOI: 10.1109/tii.2019.2908437 issn 1551-3203 **Impact Factor: 10.215** **SCIE, Q1**

[J2] **P. R. Gautam**, S. Kumar, A. Verma, and A. Kumar, "Energy-efficient localization of sensor nodes in wsns using single beacon node," *IET Communications*, vol. 14, no. 9, pp. 1459–1466, 2020. DOI: 10.1049/iet-com.2019.1298 issn 1751-8628 **Impact Factor: 1.542** **SCIE, Q3**

[J3] A. Verma, S. Kumar, **P. R. Gautam**, and A. Kumar, "Fuzzy logic based effective clustering of homogeneous wireless sensor networks for mobile sink," *IEEE Sensors Journal*, vol. 20, no. 10, pp. 5615–5623, May 2020. DOI: 10.1109/jsen.2020.2969697 issn 1530-437X **Impact Factor: 3.301** **SCIE, Q2**

[*J*4] A. Verma, S. Kumar, **P. R. Gautam**, and A. Kumar, "Neural-fuzzy based effective clustering for large-scale wireless sensor networks with mobile sink," *Peer-to-Peer Networking and Applications*, Jun. 2021. DOI: 10.1007/s12083-021-01167-6 issn 1936-6450 **Impact Factor: 3.307** **SCIE, Q2**

[*J*5] A. Verma, S. Kumar, **P. R. Gautam**, T. Rashid, *et al.*, "Broadcast and reliable coverage based efficient recursive routing in large-scale wsns," *Telecommunication Systems*, vol. 75, no. 1, pp. 63–78, Jun. 2020. DOI: 10.1007/s11235-020-00679-5 issn 1572-9451 **Impact Factor: 2.314** **SCIE, Q3**

[*J*6] M. Yadav, **P. R. Gautam**, V. Shokeen, and P. K. Singhal, "Modern fisher–yates shuffling based random interleaver design for SCFDMA-IDMA systems," *Wireless Personal Communications*, vol. 97, no. 1, pp. 63–73, May 2017. DOI: 10.1007/s11277-017-4492-9 issn 0929-6212 **Impact Factor: 1.671** **SCIE, Q3**

[*J*7] A. Verma, T. Rashid, **P. R. Gautam**, S. Kumar, *et al.*, "Cost and sub-epoch based stable energy-efficient clustering algorithm for heterogeneous wireless sensor networks," *Wireless Personal Communications*, vol. 107, no. 4, pp. 1865–1879, Apr. 2019. DOI: 10.1007/s11277-019-06362-6 issn 0929-6212 **Impact Factor: 1.671** **SCIE, Q3**

[*J*8] T. Rashid, S. Kumar, A. Verma, **P. R. Gautam**, *et al.*, "Co-reerp: Cooperative reliable and energy efficient routing protocol for intra body sensor network (intra-wbsn)," *Wireless Personal Communications*, vol. 114, no. 2, pp. 927–948, Apr. 2020. DOI: 10.1007/s11277-020-07401-3 issn 0929-6212 **Impact Factor: 1.671** **SCIE, Q3**

[*J*9] S. Kumar, **P. R. Gautam**, A. Verma, T. Rashid, *et al.*, "An energy-efficient transmission in wsns for different climatic conditions," *Wireless Personal Communications*, vol. 110, no. 1, pp. 423–444, Sep. 2019. DOI: 10.1007/s11277-019-06735-x issn 0929-6212 **Impact Factor: 1.671** **SCIE, Q3**

[*J*10] S. Kumar, **P. R. Gautam**, T. Rashid, A. Verma, *et al.*, "Division algorithm based energy-efficient routing in wireless sensor networks," *Wireless Personal Communications*, Aug. 2021. DOI: 10.1007/s11277-021-08996-x issn 1572-834X **Impact Factor: 1.671** **SCIE, Q3**

[*J*11] R. C. S. Chauhan, A. Kumar, and **P. R. Gautam**, "Optical orthogonal code generation scheme and grouping of codes for optical CDMA systems," *International Journal of System Assurance Engineering and Management*, vol. 12, no. 1, pp. 91–103, 1 Jun. 2020. DOI: 10.1007/s13198-020-01007-5 issn 0976-4348 **Impact Factor:** **ESCI, 0.47**

[*J*12] S. Kumar, **P. R. Gautam**, T. Rashid, A. Verma, *et al.*, "ETDCC: Energy-efficient transmission scheme for dynamic climatic conditions in WSN," *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, vol. 16, no. 3, p. 1126, Jun. 2018. DOI: 10.12928/telkomnika.v16i3.8513 issn 1693-6930 **Scopus**

[*J*13] T. Rashid, S. Kumar, A. Verma, **P. R. Gautam**, *et al.*, "Pm-EEMRP: Postural movement based energy efficient multi-hop routing protocol for intra wireless body sensor network (intra-WBSN)," *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, vol. 16, no. 1, p. 166, Feb. 2018. DOI: 10.12928/telkomnika.v16i1.7318 issn 1693-6930 **Scopus**

[*J*14] A. Verma, T. Rashid, **P. R. Gautam**, S. Kumar, *et al.*, "Fuzzy based stable clustering protocol for Heterogeneous wireless sensor networks," *International Journal of Engineering and Technology*, vol. 9, no. 4, pp. 2854–2860, Aug. 2017. DOI: 10.21817/ijet/2017/v9i4/170904046 issn 0975-4024 **Scopus 2017**

[*J*15] T. Rashid, S. Kumar, A. Verma, **P. R. Gautam**, *et al.*, "RB-IEMRP: Relay based improved throughput energy-efficient multi-hop routing protocol for intra body sensor network (INTRA-WBSN)," *International Journal of Computer Networks & Communications*, vol. 11, no. 02, pp. 69–82, Mar. 2019. DOI: 10.5121/ijcnc.2019.11205 issn 0974-9322 **Scopus**

[*C*1] **P. R. Gautam**, S. Kumar, A. Verma, and A. Kumar, "Localization of sensor nodes in WSNs using three dimensional angle of arrival detection at BS," in *2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, ZHCET, AMU, Aligarh: IEEE, Nov. 2019, pp. 1–4. DOI: 10.1109/upcon47278.2019.8980262 isbn: 9781728134550 issn 2687-7767 **Scopus**

[*C*2] **P. R. Gautam**, S. Kumar, A. Verma, T. Rashid, *et al.*, *Localization of Sensor Nodes in WSN Using Area Between a Node and Two Beacons*, ser. Lecture Notes in Electrical Engineering. Motilal Nehru National Institute of Technology, Allahabad: Springer, Dec. 2019, vol. 587, pp. 221–228, 1060 pp. DOI: 10.1007/978-981-32-9775-3_22 isbn: 9813297743 issn 1876-1100 **Book chapter**

[*C*3] **P. R. Gautam**, S. Kumar, and A. Kumar, "Sensor localization in wsns using rotating directional - antenna at the base station," in *Advances in VLSI, Communication, and Signal Processing*, ser. Lecture Notes in Electrical Engineering, vol. 683, Motilal Nehru National Institute of Technology, Allahabad: Springer, Oct. 2020, pp. 705–718. DOI: 10.1007/978-981-15-6840-4_58 isbn: 978-981-15-6839-8 issn 1876-1100 **Book chapter**

[*C*4] A. Kumar, S. Kumar, **P. R. Gautam**, A. Verma, *et al.*, *Performance Evaluation of Multi-operands Floating-Point Adder*, ser. Lecture Notes in Electrical Engineering. JK Institute of Applied Physics and Technology, Allahabad University, Allahabad: Springer Singapore, Dec. 2019, vol. 524, pp. 537–546. DOI: 10.1007/978-981-13-2685-1_51 isbn: 9811326843 issn 1876-1119 **Book chapter**

[*C*5] S. Kumar, A. Verma, **P. R. Gautam**, A. Dayal, *et al.*, "The load balancing of optimizing LEACH clustering algorithm with mobile sink and rendezvous nodes," in *2018 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, Madan Mohan Malaviya University of Technology,Gorakhpur: IEEE, Nov. 2018. DOI: 10.1109/upcon.2018.8596989 isbn: 978-1-5386-5002-8 issn 2687-7759 **Scopus**

[*C*6] S. Kumar, **P. R. Gautam**, A. Verma, R. Verma, *et al.*, *Energy Efficient Routing using Sectors Based Energy-Hole Reduction in WSNs*. ZHCET, AMU, Aligarh: IEEE, 2019. DOI: 10.1109/upcon47278.2019.8980254 isbn: 978-1-7281-3455-0 issn 2687-7767 **Scopus**

[*C*7] A. Verma, S. Kumar, **P. R. Gautam**, and A. Kumar, *Stable Energy-Efficient Routing Algorithm for Dynamic Heterogeneous Wireless Sensor Networks*, ser. Lecture Notes in Electrical Engineering. Motilal Nehru National Institute of Technology, Allahabad: Springer, Dec. 2019, vol. 587, pp. 221–228, 1060 pp. DOI: 10.1007/978-981-32-9775-3_15 isbn: 9813297743 issn 1876-1100 **Book chapter**

Paper presented

"**Localization of Sensor Nodes in WSNs using Three Dimensional Angle of Arrival detection at BS**" In *1st International Conference on VLSI, Communication and Signal Processing (VCAS 2018)* at MNNIT Allahabad (UP) India. *29th November to 1st December 2018*

"**Sensor Localization in WSNs Using Rotating Directional - Antenna at the Base Station.**" In *2nd International Conference on VLSI, Communication and Signal Processing (VCAS 2019)* at MNNIT Allahabad (UP) India. *21st – 23rd October 2019*

Peer Review

• IEEE Transactions on Industrial Informatics WOS (3), • IET Communications WOS (6), • International Journal of Distributed Sensor Networks WOS (6), • Asian Journal of Cardiology Research (1), • SN Applied Sciences WOS (2), and • Telecommunication Systems (2).

Workshops /FDP

1. One-week workshop on "**Antenna Design and Signal Processing for 5G Network and IoT (ADSPNIT-2017)**" held at *MNNIT Allahabad*.
   – Participated and volunteered. *27th February -4th March, 2017*
2. One-week workshop on "**Workshop on Network Simulation (WNS-2017)**" held at *MNNIT Allahabad*.
   – Participated *8th – 12th July, 2017*
3. Summer training program on "**VLSI Design & Embedded System (VDES-2017)**" held at *MNNIT Allahabad*.
   – Instructed and volunteered. *14th June – 15th July, 2017*
4. One-week workshop on "**Communication and Antenna Design for IoT (CADIT – 2017)**" held at *MNNIT Allahabad*.
   – Participated and volunteered. *22nd – 27th September 2017*
5. One-week GIAN workshop "**Advances in Nanotechnology and its Application in Future Electronics (ANFE-2017)**" held at *MNNIT Allahabad*.
   – Participated and volunteered *6th – 10th November, 2017*
6. Ten days GIAN workshop on "**Internet of Things in Smart Living & Cyber-Physical-Social Systems**" held at *IIT Kanpur*.
   – Participated and volunteered. *8th – 17th January 2018*
7. Summer training program on "**VLSI Design & Embedded System (VDES-2018)**" held at *MNNIT Allahabad*.
   – Volunteered. *13th June – 12th July, 2018*

8. One-week workshop on "**Advanced Embedded Systems & Microelectronics (AESM-2019)**" held at *MNNIT Allahabad.*
–Volunteered. *1st – 5th April, 2019*

9. ATAL Academy FDP on "**Blockchain**" held at *MNNIT Allahabad.*
– Participated. *16th – 20th September 2019*

10. ATAL Academy FDP on "**Artificial Intelligence**" held at *MNNIT Allahabad.*
– Participated. *10th – 14th December 2019*

Workshops facilitated

Manuscript preparation in LaTeX,
Programming with 8051 micro-controller.

Awards and Other Achievements

1. Awarded national scholarship "**RG-NFSC**" from UGC. *2017-2021*
2. Offered national scholarship "**MANF**" from UGC based on **NET score** *2020*
3. Eight times **GATE** qualified. *2008, 2009, 2012, 2013, 2014, 2016, 2017, and 2020*
4. Three times **NET** (Electronics Science) qualified. *Jul-2016, Jan-2017, and Dec-2019*
5. Member of **IEEE**, **IEEE Industrial Electronics Society**, **IEEE Microwave Theory and Techniques Society**, and **IEEE Broadcast Technology Society**.
6. **NPTEL Online Certification** on MATLAB for Numerical Computations.

References

1. **Dr. Arvind Kumar** *Associate Professor*, ECED, MNNIT Allahabad, Teliyarganj, Prayagraj, UP 211004, **E.Mail:** arvindk@mnnit.ac.in **Mob:***7081869266*, *– Ph.D. Thesis Supervisor*
2. **Dr. Arun Prakash** *Associate Professor*, ECED, MNNIT Allahabad, Teliyarganj, Prayagraj, UP 211004, **E.Mail:** arun@mnnit.ac.in **Mob:***9794008282.*
3. **Dr. Vijay Shankar Tripathi** *Professor*, ECED, MNNIT Allahabad, Teliyarganj, Prayagraj, UP 211004, **E.Mail:** vst@mnnit.ac.in **Mob:***8004818000.*
4. **Dr. Ram Chandra Singh Chauhan** *Associate Professor*, ECED IET Sitapur, Lucknow UP, **E.Mail:** ram1.hbti@gmail.com **Mob:***9336050184.* *– M.Tech. Dissertation Supervisor*

Personal Profile

Name:	**Dr. Prateek Raj Gautam**
DOB:	**17 June 1987**
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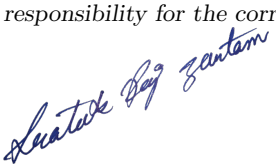
Mobile:	**+91- 9151 404 899**
Address:	**E 5409 Avas Vikas 1, Kalyanpur, Kanpur, UP - 208017, India**
Father's name:	**Mr. Shriram Gautam**
Mother's name:	**Mrs. Archana Gautam**

Declaration

I consider myself to be familiar with the various aspects of electronics and communication engineering. I hereby declare that the above information given is true to the best of my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.



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