

# Dr. Anagha Vijaysinha Rajput

School of Electronics Engineering,  
Vellore Institute of Technology,  
Vellore – 632014  
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## Research interest:

- Wireless sensor networks
- Internet of Things
- Soft computing using machine learning
- Telecommunication systems and networking

## Education:

- Yrs. 2016 – 2021*      **Ph.D.** Electronics and Communication Engineering  
Vellore Institute of Technology, Vellore, Tamil Nadu, India.  
Dissertation: Improving scalability and energy efficiency of wireless sensor networks using fuzzy-based clustering and sink selection techniques  
Supervisor: Dr. Vinoth Babu Kumaravelu
- Yrs. 2008 – 2010*      **M.Tech.** Communication Engineering, (CGPA – 7.41)  
Vellore Institute of Technology, Vellore, Tamil Nadu, India.  
Dissertation: Design and development of IP packet processing using FPGA for IP gateway router cum exchange  
Supervisors: Dr. Jayaraman and Sr. Scientist Manoj Jain
- Yrs. 2004 – 2008*      **B.E.** Electronics and Telecommunication Engineering, (percentage – 66%)  
SVERI's College of Engineering, Pandharpur,  
Solapur University, Maharashtra, India.
- Yr. 2004*              **H.S.C.** Pune board, (percentage – 81.67%)
- Yr. 2002*              **S.S.C.** Pune board, (percentage – 82.40%)

## Professional experiences:

- *07/2012 – 04/2016*      **Assistant Professor** at Department of Electronics Engineering,  
**Walchand Institute of Technology**, Solapur, Maharashtra, India
- *08/2010 – 05/2011*      **Assistant Professor** at Department of Electronics and Telecommunication Engineering,  
**Lovely Professional University**, Phagwara, Punjab, India
- *09/2009 – 05/2010*      **Project Trainee** at Central Research Laboratory (CRL-BEL),  
**Bharat Electronics Limited**, Bengaluru, Karnataka, India

**Professional profile links:**

- ORCID – [orcid.org/0000-0002-1286-504X](http://orcid.org/0000-0002-1286-504X)
- ResearchGate – [researchgate.net/profile/Anagha\\_Rajput](http://researchgate.net/profile/Anagha_Rajput)

**Technical skills:**

- Technologies/Standards – Internet of Things, IEEE 802.15.4
- Programming tools/languages – MATLAB, Fuzzy logic, Latex, Sensenut, OMNET++, C++

**Administrative experiences:**

- Assisted laboratory co-ordinator in upgradation of communication and networking laboratory at Communication Engineering Department, SENSE, Vellore Institute of Technology, Vellore
- Worked as departmental faculty co-ordinator of Entrepreneurship Development Cell at Walchand Institute of Technology, Solapur
- Worked as team member of NBA committee for departmental data collection and analysis at Walchand Institute of Technology, Solapur
- Worked as team member of NIRF committee for departmental data collection and analysis at Walchand Institute of Technology, Solapur

**Number of B.E. projects supervised: 06**

1. Automation of drilling machine using PLC (2015)
2. Tech Casino – A flexible test conducting software using QT suite (2015)
3. Remote patient monitoring system using Zig Bee (2014)
4. Intelligent indoor car parking system using IR based slot identification (2014)
5. Wireless mouse using TV remote controller (2013)
6. Wireless spy robot (2013)

**Number of courses completed: 03**

1. ‘Wireless Ad Hoc and Sensor Networks’, NPTEL online course conducted by IIT-Kharagpur, Funded by Ministry of HRD, Govt. of India, Jan. to March 2017, (Score – 80%)
2. ‘Principles of modern CDMA/ MIMO/ OFDM wireless communications’, NPTEL online course conducted by IIT-Kanpur, Funded by Ministry of HRD, Govt. of India, July to Sept. 2016, (Score – 89%)
3. ‘Educational Technology for Engineering Teachers’, e-course conducted by IIT-Bombay, Jan. to March 2016

**Research details:**

**Number of International journal papers reviewed: 06**

**Number of International conference papers reviewed: 02**

***h*-index: 4**

***i10*-index: 1**

### Journal publications –

1. **Anagha Rajput**, Vinoth Babu Kumaravelu (2021): Fuzzy techniques based clustering protocol to enhance sustainability of wireless sensor networks for monitoring applications, *Journal of Ambient Intelligence and Humanized Computing*, Springer, 12, pp. 1139-1159. doi: 10.1007/s12652-020-02159-9 (Scopus indexed, IF – 7.104)
2. **Anagha Rajput**, Vinoth Babu Kumaravelu (2021): A cluster leader selection algorithm to enhance the lifetime of scalable wireless sensor network, *Journal of Circuits, Systems and Computers*, World Scientific, 30(3), pp. 2150056. doi:10.1142/S0218126621500560 (Scopus indexed, IF – 1.333)
3. **Anagha Rajput**, Vinoth Babu Kumaravelu (2020): Fuzzy-based clustering scheme with sink selection algorithm for monitoring applications of wireless sensor networks, *Arabian Journal for Science and Engineering*, Springer, 45, pp. 6601-6623. doi: 10.1007/s13369-020-04564-w (Scopus indexed, IF – 1.711)
4. **Anagha Rajput**, Vinoth Babu Kumaravelu (2020): Fuzzy logic-based distributed clustering protocol to improve energy efficiency and stability of wireless smart sensor networks for farmland monitoring systems, *International Journal of Communication Systems*, Wiley, 33(4). doi: 10.1002/dac.4239 (Scopus indexed, IF – 1.319)
5. **Anagha Rajput**, Vinoth Babu Kumaravelu (2019): Scalable and sustainable wireless sensor networks for agricultural application of Internet of things using fuzzy-c-means algorithm, *Sustainable Computing: Informatics and Systems*, Elsevier, 22, pp. 62-74. doi:10.1016/j.suscom.2019.02.003 (Scopus indexed, IF – 2.798)
6. Arthi M., Vinoth Babu Kumaravelu, **Anagha Rajput**, Meenakshi S. (2019): A fuzzy logic based pico serving node placement for 5G ultra dense networks, *International Journal of Advanced Science and Technology*, SERSC, 28(19), pp. 108 – 115. (Scopus indexed)
7. **Anagha Rajput**, Vinoth Babu Kumaravelu (2018): Clustering techniques of wireless sensor networks for Internet of things, *Journal of Engineering and Applied Sciences*, ARPN, 13(5), pp. 1715-1733. (Scopus indexed)
8. **Anagha Rajput**, Vinoth Babu Kumaravelu (2016): Energy conservation of sensor nodes using LMS based prediction model, *International Journal of Science and Research*, 5(10), pp. 668-672.

### Conference publications –

1. **Anagha Rajput**, Vinoth Babu Kumaravelu: Smart monitoring of farmland using fuzzy-based distributed wireless sensor networks, *In proceeding of International Conference on Innovative and Emerging Technologies for Farming - Energy and Environment - Water (ITsFEW)*, Vellore, 2018. doi:10.1007/978-981-13-7968-0\_5 (Springer)
2. Vinoth Babu Kumaravelu, Arthi M., **Anagha Rajput**: A fuzzy logic based pico serving node placement for 5G ultra dense networks, *SITAMS International Conference on Innovations in Engineering, Technology and Science*, (SICIETS), Chittoor, 2018. (published in IJAST)
3. **Anagha Rajput**, Vinoth Babu Kumaravelu: Event driven distributed cluster computing technique for internet of things system, *In proceeding of International conference on Microelectronic Devices, Circuits and Systems (ICMDCS)*, Vellore, 2017. doi: 10.1109/ICMDCS.2017.8211547 (IEEE explore digital library)
4. Aniji John, **Anagha Rajput**, Vinoth Babu Kumaravelu: Dynamic cluster head selection in wireless sensor network for Internet of Things applications, *In proceeding of International Conference on Innovations in Electrical, Electronics, Instrumentation and Media Technology (ICIEEIMT)*, Coimbatore, 2017. pp. 45-48. doi: 10.1109/ICIEEIMT.2017.8116873 (IEEE explore digital library)

5. **Anagha Rajput**, Archana Kamble: FMCW RADAR signal processing using FPGAs, *National Conference on Emerging Technologies and Applications (ETA)*, Sangli, 2006.

**Book Chapter** –

1. **Anagha Rajput**, Vinoth Babu Kumaravelu, Arthi M. (2020): Smart monitoring of farmland using fuzzy-based distributed wireless sensor networks, *Emerging Technologies for Agriculture and Environment, Lecture Notes on Multidisciplinary Industrial Engineering, Singapore*. pp. 53-75, doi: 10.1007/978-981-13-7968-0\_5 (Springer book series)

**Workshops and trainings attended:**

1. ‘5G for connected society’, Webinar organized by Research and Development Cell and Department of Computer Science and Engineering, Sreenivasa Institute of Technology and Management Studies, Chittoor, 1<sup>st</sup> August 2020
2. ‘An Introduction to Numpy and Matplotlib using Spyder IDE’, Refresher programme organized by Department of Communication Engineering, School of Electronics Engineering, VIT, Vellore, 29<sup>th</sup> July 2020
3. ‘Trends and opportunities in special/index modulation for future networks’, Webinar organized by School of Electronics Engineering, VIT, Vellore, 5<sup>th</sup> June 2020
4. ‘Mendeley software’, Workshop facilitated by Software Development Cell, organized by Academic Staff College, VIT, Vellore, 29<sup>th</sup> July 2017
5. ‘LATEX for technical paper writing’, one day Workshop organized by School of Electronics Engineering, VIT, Vellore, 3<sup>rd</sup> April 2017
6. ‘Writing a good paper for international journal’, one day Workshop facilitated by Grammarly Team and Institute for Industry and International Programmes, VIT, Vellore, 27<sup>th</sup> Oct. 2016
7. ‘Fuzzy Logic for beginners’, one day Workshop organized by Academic Staff College, VIT, Vellore, 4<sup>th</sup> Oct. 2016
8. ‘Advanced communication and measurement techniques in RF’, one day Workshop by Techno-field Solutions & Synergy MTPL, 13<sup>th</sup> March 2015
9. ‘Telecom technology’, two weeks Industrial Training by BSNL, Ahmednagar, 15 to 27 Dec. 2014
10. ‘Object oriented analysis & design using UML with essentials of rational software architect’, four days Training by IBM Partner Mapleton Infotech Pvt. Ltd. Mumbai, 25 to 28 Nov. 2013
11. ‘Rational functional tester & rational quality manager’, four days Training by IBM Partner Mapleton Infotech Pvt. Ltd. Mumbai, 29 Nov. to 2 Dec. 2013
12. ‘Aakash for education’, two days ISTE Workshop by IIT-Bombay, 10<sup>th</sup> and 11<sup>th</sup> Nov. 2012
13. ‘Training course on GSM & CDMA’, five days Training by BSNL, Chennai, 7 to 11 Jan.2009
14. ‘Microwave integrated circuits and applications’, two days Workshop by School of Electrical Sciences, VIT, Vellore, Tamil Nadu, 19 and 20 Sept. 2008
15. ‘VLSI design’, one month training by Kanaad Services & Training, Sangli, 4<sup>th</sup> to 30<sup>th</sup> June 2007

**Personal details:**

Father’s name: Mr. Vijaysinha Balaram Rajput  
Mother’s name: Mrs. Jyoti Vijaysinha Rajput  
Marital status: married  
Husband’s name: Mr. Mayyursingh Pardessi

Nationality: Indian  
Date of Birth: 11-08-1986  
Languages known: English, Hindi, Marathi  
Sports: Athletics, table tennis  
Hobbies: Travelling, cloth sewing

**References:**

**Dr. S. R. Gengaje**

Professor and HOD,  
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**Dr. Vinoth Babu K.**

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**Dr. Cherry Bhargava**

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**Dr. R. J. Shelke**

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