

**Name:**

Mr. Kuchekar Nilesh Digambar

**Designation:**

Assistant Professor

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**Educational Qualifications:**

- M.E. (Electronics- Digital System), Pune University, Pune, May 2015.
- B.E. (E&Tc), Pune University, Pune, August 2009

**Experience:**

- Teaching: 12 Years

**Research Interests:**

- Communication, Embedded system, Embedded system & IOT, Robotics etc

**Research Projects:**

- **Title:** Advanced Water Deployment System for irrigation using WSN & GSM Module
- **Domain:** Embedded system

- **Description:**

The aim of this project is to design a multi-parameter monitoring system which is based on low-power ZigBee wireless technology. The Advanced Water Deployment System implemented by Wireless sensor network which contains Wireless sensor unit & Wireless information unit. Real time data is collected by wireless sensor nodes and transmitted to base station using Zigbee. The wireless network is placed in the root zone of the plants. Data is received, saved and displayed at base station to achieve soil temperature, soil moisture and humidity monitoring. The data is continuously monitored at base station and if it exceeds the desired limit, a message is sent to farmer on mobile

through GSM network for controlling actions. The objective of the work helps farmers to easily access, manage and regulate their irrigation system. The implemented GSM based irrigation system ensures that water is distributed to field properly.

### **Number of Publications:**

International Journal:06

International Conference:02

National Conference:02

### **Recognition/ Awards:**

- Achieved the **First prize & Excellent paper presentation award** with paper title, “GSM Based Advanced Water Deployment System for Irrigation using a Wireless Sensor Network & Android Mobile”, in 29<sup>th</sup> IRF International Conference on Recent Advances in Electronics & Communication Engineering (ICRAECE 2015), organized by International Research & Journal (IRAJ) forum.
- Achieved the **First prize & Best paper presentation award** with paper title, “Review of Zigbee based Automatic Control & Monitoring of Water Deployment System for Irrigation using a WSN & Android mobile”, in National Conference on Signal Processing, Computer Modeling & Mechatronics (NCSPCM2-2K16), organized by KJ College of Engineering & Management Research, Pune, Maharashtra, India.

**Number of Workshops organized: 03**

**Number of Conferences / Seminars organized: 02**

**Number of FDPs / STTPs attended: 30**

**Number of Workshops attended: 10**

**Number of Conferences / Seminars attended: 03**

**Number of Online Certification Courses done: 03**

**Number of Webinar attended: 20**

**Details of Research papers published:**

- Presented a project with title, “Advanced Water Deployment System for Irrigation using WSN & GSM Module” in IEEE-Project competition 2015, PICT College, pune, Maharashtra, India.
- Presented a paper with title, “GSM Based Advanced Water Deployment System for Irrigation using a Wireless Sensor Network & Android Mobile”, in 29<sup>th</sup> IRF International Conference on Recent Advances in Electronics & Communication Engineering (ICRAECE 2015), Pune, Maharashtra, India.
- Presented a project with title, “Advanced Water Deployment System for Irrigation using WSN & GSM Module”, in e-PG-Project exhibition 2015, pune, Maharashtra, India.
- Presented a paper with title, “Design & Implementation of Automatic Irrigation System using WSN & Zigbee module”, in International Conference on Innovations & Technological Developments in Computer, Electronics and Mechanical Engineering (ICITDCEME) 2015.
- Presented a paper with title, “Real Time Implementation of GSM based Advanced Water Saving System for Irrigation using a WSN & Android mobile”, in National Conference on Signal Processing, Computer Modeling & Mechatronics (NCSPCM2-2K16).
- Presented a paper with title, “Review of Zigbee based Automatic Control & Monitoring of Water Deployment System for Irrigation using a WSN & Android mobile”, in National Conference on Signal Processing, Computer Modeling & Mechatronics (NCSPCM2-2K16).
- Paper published with title, “A Review of GSM based Automated Water Deployment System for Irrigation using Wireless Sensor Network & Android mobile” , in International Journal of Scientific and Engineering Research (IJSER) - (ISSN 2229-5518), Volume 6, Issue 6, June 2015 Edition.

- Paper published with title, “Android based Water Deployment System for Irrigation using Wireless Sensor Network & GSM module” , in International Journal of Science and Research (IJSR)- (ISSN: 2319-7064), Volume 4, Issue 7, July 2015 Edition.
- Paper published with title, “ Microcontroller Based Advanced Water Deployment System for Irrigation using WSN & GSM Module”, in International Journal of Emerging Trends in Engineering & Development (IJETED)- ( ISSN NO.:2249-6149), Volume 4, Issue 5 , June-July 2015 Edition.
- Paper published with title, “GSM Based Advanced Water Deployment System for Irrigation using a Wireless Sensor Network & Android Mobile” , in International Journal of Electrical, Electronics and Data Communication ( ISSN NO.: 2320-2084) (IJEEDC), Volume-3, Issue-8, Aug-Sept 2015 Edition.
- Paper published with title, “Design & Implementation of Automatic Irrigation System using WSN & Zigbee module”, in International Journal of Innovations in Engineering, Research and Technology ( ISSN NO.: 2394-3696) (IJIERT) December 2015.
- Paper published with title, “Advanced Water Deployment System for Irrigation using WSN & GSM Module”, in International Engineering Research Journal (IERJ), Volume 1, Issue 5, June 2015 Edition.

#### **Details of FDPs / STTPs attended in last 5 years:**

- A one week online Faculty Development Program on “Interactive Teaching Learning Strategies With Affective & Cognitive Approach (ITLS)” from 21<sup>st</sup> June 2021 to 25<sup>th</sup> June 2021 organized by Department of Electronics and Telecommunication Engineering at PVG’s COET & GKPIM ,Pune.
- A one week online Industry Associated Faculty Development Program on “Advanced Communication using IoT & WSN” from 9<sup>th</sup> Feb 2021 to 13<sup>th</sup> Feb 2021 organized by D.Y. Patil College of Engineering, Akurdi Pune in association with Technofield Solutions Ltd. Pune under AICTE MODROB scheme.

- A one week online State Level Faculty Development Program on “Recent Trends in Renewable Energy Sources” from 1<sup>st</sup> Feb 2021 to 6<sup>th</sup> Feb 2021 organized by Department of Electrical Engineering, Rajarshi Shahu Maharaj, Polytechnic, Nashik in association with ISTE New Delhi and ISHRAE Nashik Chapter.
- A one week online Faculty Development Program on “Smart Technology Pillars of 5G and Beyond” from 27<sup>th</sup> Jan 2021 to 31<sup>st</sup> Jan 2021 organized by Department of E&TC, Sinhgad Institute of Technology & Science, Narhe, Pune.
- A Five Days online National Level Faculty Development Program on “Research & Application Perceptive of Artificial Intelligence” from 21<sup>st</sup> Dec 2020 to 25<sup>th</sup> Dec 2020 organized by Department of Electronics and Telecommunication Engineering, VIIT, Pune.
- A Two week online AICTE Sponsored Faculty Development Program-2 on “Research Challenges in Optical Networks, WDM Optical Networks, Sensor Networks & Unparallel Communication Speed in the Future: A Scalable Approach” from 30<sup>th</sup> Nov 2020 to 11<sup>th</sup> Dec 2020 organized by Department of ECE, Ramachandra College of Engineering, Eluru, Andhra Pradesh.
- A one week online Faculty Development Program on “Data Science and Artificial Intelligence” from 7<sup>th</sup> Nov 2020 to 11<sup>th</sup> Nov 2020 organized by Department of Electronics and Telecommunication Engineering, Sinhgad Academy of Engineering, Kondhwa(Bk), Pune-48 in association with BWC Advisory Solutions and IEEE Signal Processing Society, Pune chapter.
- A one week online National Level Faculty Development Program on “Computational Intelligence for Cyber Security” from 26<sup>th</sup> Oct 2020 to 2<sup>nd</sup> Nov 2020 organized by Department of Electronics & Telecommunication Engineering, A.I.S.S.M.S. Institute of Information Technology, Pune in association with Logixcode Education & I.E.T.E. Pune Section .

- A Five Days online National Level Faculty Development Program on “5G Communication” from 20<sup>th</sup> Oct 2020 to 24<sup>th</sup> Oct 2020 organized by Department of Electronics & Telecommunication Engineering, VIIT, Pune.
- A Three Days online National Level Faculty Development Program on “Outcome Based Education” from 6<sup>th</sup> Oct 2020 to 8<sup>th</sup> Oct 2020 organized by Internal Quality Assurance Cell, PVG's College of Engineering and Technology, Pune-09 in association with INPODS.
- A one week online Faculty Development Program on “Advancements & Research Opportunities in Electronics & Telecommunication Engineering” from 4<sup>th</sup> August 2020 to 8<sup>th</sup> August 2020 jointly organized by Department of Electronics & Telecommunication Engineering, Bharati Vidyapeeth (Deemed to be University) College of Engineering, Pune & Shahajirao Patil Vikas Prathishthan S. B. Patil College of Engineering, Indapur.
- A one week National Level Faculty Development Program on “Online Social Network” from 20<sup>th</sup> July 2020 to 25<sup>th</sup> July 2020 Organized by IEEE MIT ADT University Student Branch & Department CSE, in association with IEEE Computer Society, Pune.
- A one week National Level Faculty Development Program on “Recent Trends in Mechatronics and Automation” from 30<sup>th</sup> June 2020 to 4<sup>th</sup> July 2020 Jointly Organized by the Department of Mechanical Engineering and Electronics & Telecommunication Engineering, NBN Sinhgad School of Engineering, Ambegaon (Bk) Pune-41.
- A one week National Level online Faculty Development Program on “Research Methodology: Data Collection Methods, Research Tools and Techniques” from 9<sup>th</sup> June 2020 to 15<sup>th</sup> June 2020 organized by Research and Development Cell, AISSMS's IOIT, Pune.

- A Five days online Faculty Development Program on “Advancements of Internet of Things ” from 8<sup>th</sup> June 2020 to 12<sup>th</sup> June 2020 organized by Computer Engg. Dept. of Marathwada Mitra Mandal’s College of Engineering, Pune.
- A one week online Faculty Development Program on “Linux” from 25<sup>th</sup> May 2020 to 29<sup>th</sup> May 2020 organized under Spoken Tutorial Project, IIT Bombay, funded by NMEICT, MHRD, Govt. of India organized by Electronics & Telecommunication Department of Pune Vidyarthi Griha’s College of Engineering and Technology, Pune.
- A one week online Faculty Development Program on “Scilab” from 18<sup>th</sup> May 2020 to 22<sup>nd</sup> May 2020 organized under Spoken Tutorial Project, IIT Bombay, funded by NMEICT, MHRD, Govt. of India organized by Electronics & Telecommunication Department of Pune Vidyarthi Griha’s College of Engineering and Technology, Pune.
- A one week online AICTE Sponsored Short Term Training Program on “Cybersecurity and Blockchain Technology” from 11<sup>th</sup> Jan 2021 to 16<sup>th</sup> Jan 2021 organized by Department of Information Technology, Sanjivani College of Engineering, Kopergaon, Maharashtra.
- A one week online AICTE Sponsored Short Term Training Program on “Blockchain Technologies and Use cases Thread III” from 21<sup>st</sup> Dec 2020 to 25<sup>th</sup> Dec 2020 organized by Department of Computer Engineering, Vishwakarma Institute of Information Technology, Pune.
- A one week online AICTE Sponsored Short Term Training Program on “Digitally Controlled Power Converters for Industrial and Renewable Applications (Phase-III)” from 14<sup>th</sup> Dec 2020 to 19<sup>th</sup> Dec 2020 organized by Department of Electronics and Telecommunication Engineering and Department of Electrical Engineering, SSBT’s College of Engineering & Technology, Bambhori, Jalgoan.

- A one week online AICTE Quality Improvement Scheme Sponsored Short Term Training Program on “Artificial Intelligence & 5G Communication Technology” from 7<sup>th</sup> Dec 2020 to 12<sup>th</sup> Dec 2020 organized by Department of Electronics & Communication Engineering, Poornima College of Engineering, Jaipur.
- A one week online AICTE Sponsored Short Term Training Program (3<sup>rd</sup> Phase) on “ICT Tools for Engineering College Teaching and Outcome Based Learning” from 9<sup>th</sup> Nov 2020 to 14<sup>th</sup> Nov 2020 organized by Department of Electronics & Communication Engineering Raghu Institute of Technology (Autonomous), Vishakhapatnam.
- A Five days National Level AICTE Sponsored Virtual Short Term Training Program on “Drivers of Industry 4.0” from 19<sup>th</sup> Oct 2020 to 23<sup>rd</sup> Oct 2020 organized by Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bangalore.
- A one week online AICTE Sponsored Short Term Training Program on “Computer Networking & Network Security” from 21<sup>st</sup> Sept 2020 to 26<sup>th</sup> Sept 2020 organized by Department of Electronics Engineering, Bharati Vidyapeeth (Deemed to be University) College of Engineering, Pune.
- A one week online AICTE Sponsored Short Term Training Program under AQIS on “Data Science” from 7<sup>th</sup> Sept 2020 to 12<sup>th</sup> Sept 2020 organized by Department of Information Technology, Noida Institute of Engineering And Technology, Greater Noida.
- A National Level Virtual Short Term Training Program on “Innovative Smart Grid Technologies” from 2<sup>nd</sup> Sept 2020 to 4<sup>th</sup> Sept 2020 organized by the Department of Electrical & Electronics Engineering, Sri Sivasubramaniya Nadar College of Engineering, Chennai.



- A one week online AICTE Sponsored under AQIS Short Term Training Program on “Computer Networking” from 24<sup>th</sup> Aug 2020 to 29<sup>th</sup> Aug 2020 organized by Department of Electronics Engineering, Bharati Vidyapeeth (Deemed to be University) College of Engineering, Pune.

Any other information which is not covered in above points:

- A One day Online National Level Workshop on “How to Plan a Research” from 3<sup>rd</sup> Oct 2020 to 3<sup>rd</sup> Oct 2020 organized by Research & Development Cell of GH Raisoni, University, Amaravati.
- A Two days Online Workshop on “Design of IoT Using Arduino” from 29<sup>th</sup> Aug 2020 to 30<sup>th</sup> Aug 2020 organized by Shree Sai Engineering Solution, Thane (W).
- A Three days Online National Level Workshop on “Introduction to Deep Learning” from 21<sup>th</sup> Aug 2020 to 23<sup>rd</sup> Aug 2020 organized by Department of Electronics and Communication Engineering, Anurag University, Ghatkesar, Hyderabad in association with Skill to Hire.
- A Three days Online National Level Workshop on “Introduction to IOT & Arduino” from 10<sup>th</sup> Aug 2020 to 12<sup>th</sup> Aug 2020 organized by Department of Electrical & Electronics Engineering, Nandha Engineering college, Erode, Tamilnadu in association with Skill to Hire.
- A one day online “VIRTUAL LABS: HANDS-ON WORKSHOP” on 18<sup>th</sup> July 2020 organized by PVG’s COET, Virtual Labs Regional Center (Pune) RCID 01 Jointly with AISSMS COE, Nodal Center in Coordination with BoS (E & TC) Savitribai Phule Pune University (SPPU) & Virtual Labs-Indian Institute of Technology Bombay, Mumbai.

- A Three days online “Research Oriented International Webinar Series (ROIWS - 2020)” from 11<sup>th</sup> Sept 2020 to 13<sup>th</sup> Sept 2020 organized with the collaboration of Department of Electronics and Telecommunication and Electrical Engineering at Government Engineering College, Jagdalpur, Chhattisgarh.
- A Six days online International Webinar Series on “Novel Trendlines in Technology and Job Prospects” from 10<sup>th</sup> August 2020 to 15<sup>th</sup> August 2020 organized by Department of Electronics & Communication Engineering, Electrical & Electronics Engineering, Universal Engineering College, Vallivattom, Vellangallur (PO), Thrissur (Dist.), Kerala.
- A Five days National Level online Industrial training Program on “Future Scope of Engineering in Global Development” from 27<sup>th</sup> July 2020 to 31<sup>st</sup> July 2020 organized by Department of Electronics & Communication Engineering , Velalar College of Engineering & Technology, Erode, Tamilnadu in association with The Pantech Solutions, Chennai.
- A Sixteen online Sessions on “To promote Innovation, IPR, Entrepreneurship, and Start-ups among HEIs” from 28<sup>th</sup> April 2020 to 22<sup>nd</sup> May 2020 organized by Institution's Innovation Council (IIC) of MHRD's Innovation Cell, New Delhi.
- A One Week Online AICTE - ISTE Sponsored Induction / Refresher Program on “Machine Learning and Pattern Recognition (Phase-III)” from 21<sup>st</sup> Dec 2020 to 26<sup>th</sup> Dec 2020 organized by Department of Electronics and Telecommunication Engineering, SSBT's College of Engineering & Technology, Bambhori, Jalgaon (MS), India.