

FACULTY PROFILE

Work Shop Participated:

- Two days FDP on “Empowering Teachers” organized by IP dept., MCE, Hassan, on 24th and 25th October 2013.
- Three days FDP on “HYDRAULIC, PNEUMATIC SYSTEMS IN INDUSTRIAL AUTOMATION” conducted by BOSCH REXROTH, organized by MCE, Hassan, on 27th - 29th January 2014.
- One day FDP on “India’s achievement in space Technology and Social Development in Technical Education” organized by ECE dept., MCE, Hassan, on 16th October 2014.
- One day FDP on “Hands on experience in Antenna design using ANSYS HFSS” organized by ECE dept., MCE, Hassan, on 28th October 2014.
- Three days FDP “Pedagogical Training Program for Faculty Members” organized by ECE dept., MCE, Hassan, on 15th - 17th December 2014.
- Two days FDP on “Recent Trends in Antenna Research and Communication” organized by ECE dept., MCE, Hassan, on 6th and 7th April 2015.
- One-week FDP on “FEEL TEACHER” Learning and Development intervention, organized by Malnad College of Engineering, Hassan, and conducted by College for Leadership and Human Resource Development (CLHRD) from 6th April to 11th of June 2016.
- One day FDP on “VIRTUAL LABORATORY” organized by ECE dept., MCE, Hassan, on 16th February 2017.
- Two days FDP on “INTERNET OF THINGS FOR REAL TIME APPLICATIONS” organized by ECE dept., MCE, Hassan, on 13th and 14th March 2017.
- Two days FDP on “Applied Sensor Technology” conducted by Bosch Rexroth, Bengaluru, on 27th and 28th March 2017.
- Three days FDP “Image Processing and Pattern Recognition Techniques” organized by ECE dept., MCE, Hassan, on 24th - 26th March 2017.
- One days FDP “Antenna design using HFSS Simulator” organized by ECE dept., MCE, Hassan, on 25th March 2017.
- Two days FDP “Hands on training on Cadence VLSI design tool” organized by ECE dept., MCE, Hassan, on 18th and 19th March 2017.
- Two days FDP “Robotics and Embedded Systems” organized by ECE dept., MCE, Hassan, on 23rd and 24th March 2017.
- One-week FDP on “MEMS & MOEMS” organized by ECE dept., MCE, Hassan from 30th April to 4th may 2018.
- One-week FDP on “Machine Learning” organized by ECE dept., MCE, Hassan from 28th June to 2nd July 2018.
- One day FDP on “Essentials for Academic Research” organized by MCE, Hassan 20th July 2018.

- Four days FDP on “Summer school in Optics and Photonics(SOAP) organized by ECE dept., IISc, Bengaluru from 25th to 28th July 2018.
- One-week FDP on “Optics and Photonics” organized by IISc, Bengaluru from 25th July to 28th July 2018.
- Two days FDP “Being a Great Teacher” organized NIE, Mysore, on 7th and 8th September 2018.
- Two days FDP “Research Merthodology” organized by Mechanical dept., MCE, Hassan, on 3rd and 4th November 2018.
- One-week FDP on “Recent advances in Photonics” organized by JEC, Assam from 3rd to 8th Dec 2018.
- Three days FDP on “Hands-on Training on Photonic Sensor Simulation Tools” organized by ECE dept., MCE, Hassan from 03rd to 5th Oct. 2019.
- Two-week FDP on “Green, Smart, 5G communication” organized by ECE dept., MCE, Hassan from 09th Dec to 23rd Dec 2019.
- Three days FDP on “RECENT TRENDS IN PHOTONICS” organized by ECE dept., DSU, Bengaluru from 30th June to 2nd July 2020.
- Two days FDP on “RESEARCH AND PUBLICATION ETHICS” organized by ECE dept. DSU, Bengaluru from 5th and 6th August.
- One-week FDP on “Advances in Signal Processing and Wireless Communication” organized by ECE dept., RIT, Hassan from 24-29 August 2020.
- One-week FDP on “Creating Smart and Green Society through Advance Technology of Green Energy” organized by Mechanical dept., MCE, Hassan, AICTE sponsored phase-1 from 10-15 December 2020.
- One-week FDP on “Creating Smart and Green Society through Advance Technology of Green Energy” organized by Mechanical dept., MCE, Hassan, AICTE sponsored phase-2 from 17-22 December 2020.
- One-week AICTE Training and Learning (ATAL) Academy FDP on "Quantum and Photonics" Organized by MCE, Hassan, on 29/11/2021 to 03/12/2021
- One-week FDP on “An Overview of Teaching Techniques in Basics of Electronics and Communication Engineering” Organized by VTU-VIAT, Muddenahalli, Chikkaballapur, on 13th to 17th December 2021
- One day FDP on “Intellectual property rights and Cyber law” organized by ECE dept., MCE, Hassan, 17th October 2022.
- One day FDP on “Programming in Python” organized by Mathematics dept., MCE, Hassan, 10th December 2022.
- 6-months certification course “IUCEE INTERNATIONAL ENGINEERING EDUCATOR CERTIFICATION PROGRAM” Fall 2022, IUCEEP, USA.
- One week Faculty Development Program on ‘ADVANCED COMMUNICATION SYSTEMS’ organized by Department of ECE, Lakireddy Bali Reddy College of Engineering, Andhra Pradesh from 05 to 09th June 2023.
- One week Faculty Development Program on “IMPLEMENTATION OF SPEECH AND IMAGE PROCESSING ON FPGA” organized by Department of ECE, Dayananda Sagar College of Engineering, Bengaluru, from 20 to 24th November 2023.

- Two-week FDP on “Opportunities and challenges in entrepreneurship” organized by JSSATEB, Science and technology entrepreneurship park, Bengaluru, from 3rd – 19 Jan 2024, sponsored by NSTEDB, Govt. of India.
- One week FDP on “Cyber security and Ethical hacking” organized by Kalpataru institute of technology, Tiptur, from 12th – 17th Feb 2024.
- One-week AICTE Training and Learning (ATAL) Academy FDP on " Artificial Intelligence Driven Advances in VLSI IC Design for IoT Applications: Hands on using Cadence Tools" Organized by B.G.S INSTITUTE OF TECHNOLOGY from 03/02/2025 to 08/02/2025.

Papers Published:

International Journals:

1. Kumar, B.M.H., Srikanth, P.C. & Vaibhav, A.M. “A novel computation method for detection of Malaria in RBC using Photonic biosensor.” *Int. j. inf. technol.* 13, 2053–2058 (2021). <https://doi.org/10.1007/s41870-021-00782-z>.
2. Kumar BMH, Vaibhav AM, Srikanth PC. (2022) Si/SiO₂ Based Nano-cavity Biosensor for Detection of Anemia, HIV and Cholesterol Using Refractive Index of Blood Sample. *Indian Journal of Science and Technology*. 15(18): 899-907. <https://doi.org/10.17485/IJST/v15i18.186>
3. Hemanth Kumar B.M, Preetha Monis, Nirupa Raj, Lekhana, Navya “Blood Cancer Detection Using Photonic Crystal Based Biosensor” Vol. VII, No. 3 : 2021 ISSN 2277-7067, Shodhsamhita: Journal of Fundamental & Comparative Research, Journal of Kavikulaguru Kalidas Sanskrit University, Ramtek, NCRTE -2021
4. Hemanth Kumar B M, Bharath Kumar S M, Bhavana N M, Gowtham G S, Meghana Gowri G “AUTOMATIC PET FOOD DISPENSER USING DIGITAL IMAGE PROCESSING” Vol. 12, Issue 5, May 2023, ISSN (O) 2278-1021, ISSN (P) 2319-5940, International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE). [DOI: 10.17148/IJARCCE.2023.125139](https://doi.org/10.17148/IJARCCE.2023.125139)
5. Hemanth Kumar B M, Meghana R, Keerthana, Dharshini K S, Mohammad Owais “MULTIFUNCTIONAL VEHICLE SECURITY SYSTEM”, Vol. 12, Issue 6, June 2023, ISSN (O) 2278-1021, ISSN (P) 2319-5940, International Journal of Advanced Research in Computer and Communication Engineering (IJARCCE). [DOI: 10.17148/IJARCCE.2023.12613](https://doi.org/10.17148/IJARCCE.2023.12613)
6. Raghu N., Yogesh Kumaran S., Rajeshwari D., Ganesh Srinivasa Shett, Hemanth Kumar B. M., Anil Kumar D. B. Niranjan Kannanugo “Design and Implementation

of Smart Blind Stick for Obstacle Detection and Navigation System”, Vol 20, No. 2s (2024), Journal of Electrical systems. <https://doi.org/10.52783/jes.1770>.

International Conference:

1. Hemanth Kumar B.M., A. M. Vaibav and P. C. Srikanth, "2D Photonic Crystal based Biosensor for detection of Cervical Cancer cell," *2020 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)*, 2020, pp. 1-4, [doi: 10.1109/CONECCT50063.2020.9198418](https://doi.org/10.1109/CONECCT50063.2020.9198418).
 2. Hemanthkumar B M, Sinchana H M, Sinchana Prakash, Karthik M, 2020, Detection of Dengue using Photonic Biosensor, INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT) NCETESFT – 2020 (Volume 8 – Issue 14). [DOI : 10.17577/IJERTCONV8IS14024](https://doi.org/10.17577/IJERTCONV8IS14024)
 3. Hemanth Kumar B.M., A. M. Vaibav and P. C. Srikanth, " Multiple Diseases Detection by Novel Computation Method using 2D Photonic Biosensor " 8th International Conference on “Computing for Sustainable Global Development”, 17th - 19th March, 2021 Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi (INDIA), INDIACom-2021; IEEE Conference ID: 51348
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1. B. M. Hemanth Kumar, K. B. Naveen, L. S. Ravi, M. Taskeen, B. Naveen and N. S. Narendra, "Missile Guidance system using Kalman Filtering," *2024 International Conference on Recent Advances in Science and Engineering Technology (ICRASET)*, B G Nagara,Mandya, India, 2024, pp. 1-5, [doi: 10.1109/ICRASET63057.2024.10895928](https://doi.org/10.1109/ICRASET63057.2024.10895928).
 2. B. M. Hemanth Kumar, N. Prakash, C. Namitha, H. R. Chandana, G. Jeevan and G. Manjunath, "Solar Harmoni Air: The Integration of Solar Power for Intelligent Outdoor Air Purification and Monitoring System," *2024 International Conference on Recent Advances in Science and Engineering Technology (ICRASET)*, B G Nagara,Mandya, India, 2024, pp. 1-6, [doi: 10.1109/ICRASET63057.2024.10895174](https://doi.org/10.1109/ICRASET63057.2024.10895174).

National Conference:

1. Hemanth Kumar B.M., A. M. Vaibav and P. C. Srikanth, " Detection of Dengue using Photonic Biosensor" (*VCCVIT2020*) held on September, Volume 1, CVIT-2020.

Patent:

1. “Intelligent Mobility Vehicle for waste collection during surgeries in Hospital” UK patent. Design number: 6362660, Grant date: 07 May 2024

2. "Title of the invention: GREEN ROOF SYSTEM WITH INTEGRATED RAINWATER HARVESTING." Application No.202441043401 A, Publication Date: 14/06/2024.
3. "Solar Powered Water Purification Device" UK patent. Design number: 6372128, Grant date: 21 June 2024.

Book chapter:

1. Raghu, N., Swetha, G., Druva, Shruthishree, Rekha, Niranjan Kannanugo, & Hemanth Kumar. (2024). "COVID-19 Pandemic Personal Safety Is Revolutionized by the Smart Mask." In P. Prabhakar (Ed.), Biomedical Research Developments for Improved Healthcare (pp. 78-99). IGI Global. <https://doi.org/10.4018/979-8-3693-1922-2.ch005>
2. Raghu, N., Trupthi V. N, Hemanth Kumar B. M., H., & Smitha A S. "Enhancing Critical Thinking Through Problem-Based Learning: A Comprehensive Approach to Modern Education". In M. Lytras, P. Ordóñez de Pablos, & T. Aldosemani (Eds.), Fostering Teacher Skills and Critical Thinking in Modern Education (pp. 259-282). IGI Global Scientific Publishing (2025). <https://doi.org/10.4018/979-8-3373-1692-5.ch011>

Industrial Training:

1. 15 days industrial training in KMF, Dairy circle, Hassan.