

Name of Faculty Dr. Kiran Kumar Amireddy
 Designation Assistant Professor
 Nature of Job/Appointment Regular
 Date of Joining 21-02-2022
 E-mail akirankumar_mech@cbit.ac.in



Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Mechanical Engineering), IIT-Madras	First with Distinction
PG	M. Tech (Design Engineering) KITS-Warangal	First with Distinction
UG	B. Tech (Mechanical Engineering) KITS-Warangal	First

Work Experience

Teaching 04 years
 Research 09 years
 Industry 04 years
 Others ---

Area of Specialization Ultrasonics and acoustics, Structural health monitoring, Micro and nano imaging, Metamaterials, NDT&E, Materials characterization and wave propagation, Nonlinear Ultrasonics and Composite materials

Professional Memberships AICTE, ISNT, IAAM

Responsibilities held at Institution Level Coordinator SATHI Project, Coordinator for visiting of Prestigious Institutions and R&D labs

Responsibilities held at Department Level Department Academic coordinator

Research Guidance B.Tech : 8; M.Tech : 3

- Awards Received
- Received Best Teacher Award in the field of R&D from CBIT, Hyderabad on 5th Sep, 2022
 - Received INSC Young Researcher -2022
 - Received "Limelight" award for Excellence in Projects for the year 2020 from Saint-Gobain Research India, Chennai.
 - Received "Best thesis Award" for my PhD thesis from Ultrasonic society of India, 2019.
 - Received "European young scientist Award" for best oral presentation at EAMC-2018, Sweden.
 - Received 'Gandian Young Technological Innovation Award' (GYTI) for the year 2018 from
 - President of India during the Festival of Innovation and Entrepreneurship (Fine) on 19th March, 2018 at Rashtrapati Bhavan, New Delhi.
 - 'Institute Best Research Award' in recognition of Quality and Quantity of the Research Work done (Awarded during 58th Institute Day celebration), at IIT Madras, Chennai, 18th April, 2017
 - "Silver Award" at the International Conference (QNDE-2017) held at Salt Lake City, Utah, USA, 2017
 - Four "Best Paper Awards" at various National Symposiums and Conferences

11. Received Travel grant under “Young Scientist award” Sponsored by Department of Science and Technology (SERB) to attend an international conference in USA
12. Received Merit certificate as best student for Overall Academic performance (Gold medal) in PostGraduation, from Kakatiya University in 2011

	Under Graduate	Post Graduate
Courses Handled at Under Graduate / Post Graduate Level.	Robotics and Drones Lab, Digital Fabrication Lab, CAD&D, Industrial safety and Maintenance, Introduction to Python programming, Engineering Exploration, CAD/CAM, Engineering Drawing Finite Element Analysis Advanced Mechanics of Solids/Mechanics of solids-II Design of Machine Elements	Fault Diagnosis of Machinery Stress Analysis Finite element Analysis Applied Finite element analysis
No. of Papers Published	National Journals – 06 National Conference – 15	International Journals – 15 International Conference – 20
Projects Carried out	<ol style="list-style-type: none"> 1. DST sponsored SATHI Project-in collaboration with IIT Hyderabad 2. Image Analysis and Website development 3. Lamination of Areca nut composite balustrades 4. Acoustic metamaterials for super-resolution ultrasonic imaging 5. Ultrasonic waveguides for multipoint temperature measurement 6. Portable rheology and Temperature sensors 7. Acoustic insulation improvement of Gypsum boards 	
Patents	<ol style="list-style-type: none"> 1. Method and system for detection of delamination in a layered structure (Appl No: 202241067170A Filing Dt: 22-11-2022, PUBLICATION Dt: 23-12-2022). 2. Robotic manipulator for pick and place applications (Appl No: 202241067534A, Filing Dt: 24-11-2022, PUBLICATION Dt: 02-12-2022). 	
Technology Transfer	--	
Invited Speaker	<ol style="list-style-type: none"> 1. Delivered Guest lecture on Robotics and Drones for VIT Bhopal University. 2. SESSION CHAIR to the 1st EAI International Conference on Emerging Technologies in Engineering and Management Sciences (ICETEMS- 2023) held during 24th - 25th November 2023 at Vardhaman College of Engg,Hyd. 3. Delivered guest lecture on Robotics programming using Python at SRI SAI INSTITUTE OF TECHNOLOGY AND SCIENCE, RAYACHOTI, YSR DISTRICT, ANDHRA PRADESH, INDIA. 4. Resource person for the workshop on Computer vision using Python at VKR engineering college, Gudivada, AP. 5. Delivered an invited lecture at the ATAL online FDP on Quantum Artificial intelligence at IIIT Pune (2021) 6. Delivered an invited lecture on Quantum computing and its Algorithms at Vardhaman College of Engineering, Hyderabad (2020) 7. Delivered an invited lecture on Quantum Algorithms at JNTUA College of Engineering, Pulivendula (2020) 8. Delivered an invited talk as a keynote speaker at European Advanced Material Congress (EAMC), Sweden (2018) 	
	<ol style="list-style-type: none"> 1. A book chapter on “Metamaterials for Subwavelength Imaging” in Techniques and Innovation in Engineering Research Vol. 5. 	

No. of Books/Chapter Published with details

1. Coordinator for the One-week ATAL FDP on Sensor design and Industry 5.0
2. Coordinator for One-month summer internship on Python and innovative projects
3. Coordinator for one-month winter internship on Introduction to Python and OpenCV
4. Two Weeks Short Term Program on Robotics and Drone Organized by CBIT, Hyderabad.
5. One week FDP on Python Basics organized by CBIT, Hyderabad.
6. Two Weeks Advanced FDP on Electronics Systems Design organized by AICTE at KSRCT, Tamil Nadu, 2022
7. One-week Online FDP on “Quantum Artificial Intelligence” organized by IIIT Pune, 2021
8. Two-week Faculty Development programme on “Modeling and Optimization of Manufacturing Systems Using Intelligent Techniques”, Satyamnagalam, Tamilnadu, 2013
9. 3-day national Level Faculty Development programme on ‘Digital Manufacturing in the global Era’, Tirupati, 2013
10. 1-day National Work Shop on “Evolution Algorithms, For Optimization of Engineering Problems” Huzurabad, 2013
11. 1-day National Work Shop on “Training on CNC Machining: Tools and Techniques (TCMTT 2013)” Hyderabad, 2013
12. Two-week staff development programme on ‘Machine condition Monitoring and Fault Diagnostics’ Vijayawada, 2012
13. Two-day National Seminar on “Finite Element Methods & Its Applications”, Bangalore, 2012.
14. One-day Workshop on “Optimization Methods in Engineering Problems”, Huzurabad, 2012
15. One-day Workshop on New Paradizams in Manufacturing” at NIT-warangal, 2012

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Trainings (**Attended and/or organized**).

Details of Journal Publications/ Conferences (**National and International**)

International Journal

1. Sushma Chinta, Kiran Kumar Amireddy, Ravinder Reddy Pinninti and Koorapati Eshwar Prasad, “Fracture Parameters of Woven Jute Fibre Reinforced Axial Flow Fan Blade Material: An Experimental Investigation and FEA Analysis”, Engineering Research Express, (2023).
2. Kiran Kumar Amireddy, S. Solomon Raj, Sushma Chinta and G. Laxmaiah, “Ultrasonic Evaluation of Paint Canisters”, E3S Web of Conferences, (2023).
3. Kiran Kumar Amireddy, S. Solomon Raj, “Metamaterials for Subwavelength Imaging”, Techniques and Innovation in Engineering Research, Vol. 5, (2023.)
4. Ch.Indira Priyadarsini, T.Ratna Reddy and **Kiran Kumar Amireddy**, “Numerical Analysis of Interchangeable Battery Container”, International Journal of Research and Analytical Reviews, Volume 9, Issue 2 pp. 173-180. (2022).
5. **K. K. Amireddy**, K. Balasubramaniam and P. Rajagopal “Porous metamaterials for deep subwavelength ultrasonic imaging”. Applied Physics Letters 113, 124102, (2018); <https://doi.org/10.1063/1.504508>.
6. **K. K. Amireddy**, K. Balasubramaniam, and P. Rajagopal, “Deep subwavelength ultrasonic imaging using optimized holey structured metamaterials”, Nature Scientific Reports 7, 7777 (2017).
7. **K. K. Amireddy**, K. Balasubramaniam, and P. Rajagopal, “Holey structured metamaterial lens for subwavelength resolution in ultrasonic characterization of metallic components” Applied Physics Letters 108, 224101 (2016).

8. **K.K. Amireddy** and K.R.N. Reddy, Condition Monitoring of steam turbine through Ferrography, International Journal of Advanced Materials Manufacturing & Characterization 3, Issue 1 pp 183187 (2013).

National Journal

1. **K. K. Amireddy**, P. Rajagopal, and K. Balasubramaniam, "Periodicity dependent properties of holey phononic crystals", Pure and Applied Ultrasonics, Vol. 44, No. 1-2 (2022).
2. Syed Akbar Ali, M.S., **Amireddy, K. K.**, P. Rajagopal and K. Balasubramaniam, "Characterization of Deep Sub-Wavelength Sized Horizontal Cracks Using Holey-Structured Metamaterials". Trans Indian Inst Met, (2019). <https://doi.org/10.1007/s12666-019-01684-2>.
3. **K. K. Amireddy**, P. Rajagopal, and K. Balasubramaniam, "Subwavelength resolution of delaminations", NDT.net, The e-Journal of Non-destructive Testing–ISSN1435-4934(2016).
4. **K. K. Amireddy**, P. Rajagopal, and K. Balasubramaniam, "Holey structured metamaterials for deep sub-wavelength resolution of delaminations", Journal of Pure and Applied Ultrasonics.

International Conference Presentation

1. Ch Indirapriyadarsini, P.Anjani Devi, and Amireddy Kiran Kumar, "CFD Analysis of Solar-Wind Hybrid Power Generation System", Energy Sustainability (AICTE-ES) during 20-21 May, 2022.
2. K. K. Amireddy, Ch, V. Sushma and Ch. Indira Priyadarshni, "Ultrasonic Evaluation of Paint Canisters", ASME 2022 49th Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE-2022), July, 2022.
3. Kiran Kumar Amireddy, Ch. Indira Priyadarshni and P. Anjani Devi, Heat Transfer Enhancement Study with Rectangular and Trapezoidal Fins using Finite Volume Method, 2nd GEAST International conference EECC-2022
4. K. K. Amireddy, et al., "Holey structured metalens for deep sub-wavelength resolution of cracks in metallic materials using ultrasound", APCNDT, Singapore, 2017.
5. K. K. Amireddy, et al., "Deep sub-wavelength ultrasonic imaging", Proc. of QNDE-2017, Utah, USA (2017)
6. K. K. Amireddy, et al., "Subwavelength Imaging of Cracks in the Metallic Materials" Proc. of the 38th Progress In Electromagnetics Research Symposium (PIERS)-2017 in St. Petersburg, Russia, (2017)
7. K. K. Amireddy, et al., "Subwavelength resolution of delaminations", Proc. of 8th international symposium of NDT in Aerospace, (2016)
8. K. K. Amireddy, et al., "Subwavelength resolution of cracks in metallic materials", Proc. of QNDE2016, Georgia, Atlanta, USA (2016)
9. K. K. Amireddy, et al., "Ultrasonic Measurements of the Elastic Moduli of Hybrid Natural Short fiber reinforced green composites" Proceedings of APCNDT 2013, Mumbai, India, November 18-22, 2013.
10. K. K. Amireddy, et al., "Condition Monitoring of Steam turbine through Ferrography", Proceedings of the Annual International Conference on Materials Processing and Characterization, Hyderabad from 16-17 march 2013.
11. K. K. Amireddy, et al., "Ferrosopic Analysis of Turbine Oil Analysis", International Conference on AMMT-2013, SIT-Tumkur on 2nd may-2013.

National Conferences

1. K. K. Amireddy, et al., "Holey structured periodic arrays for sub wavelength resolution", Proc. of NDE, (2016)

2. K. K. Amireddy, et al., "Subwavelength ultrasonic imaging", Research scholar day, Department of Mechanical Engineering, IIT Madras (2016)
3. K. K. Amireddy, et al., "Subwavelength ultrasonic imaging with holey metamaterial", Proc. of NDE-2015
4. Kiran K. K. Amireddy, et al., "Ultrasonic measurements of the elastic moduli of natural fiber reinforced cellulose composites" Proc. of NDE, (2015)
5. K. K. Amireddy, et al., "Applications of MEMS in Bio-Medical Field", conference on Advances in Mechanical Engineering (AIME-2012), Singapore, Huzurabad on 18th February 2012.

