



ANNAMACHARYA UNIVERSITY

EXCELLENCE IN EDUCATION; SERVICE TO SOCIETY
(ESTD, UNDER AP PRIVATE UNIVERSITIES (ESTABLISHMENT AND REGULATION) ACT, 2016)
Rajampet, Annamayya District, A.P – 516126, INDIA

Profile

• **Basic Information:**

NAME	:	AJAYA KUMAR REDDY K
DESIGNATION	:	Assistant Professor
DEPARTMENT	:	Mechanical Engineering
DATE OF BIRTH	:	21-11-1987
DATE OF JOINING	:	25-10-2012
EMAIL ID	:	kakr@annamacharyauniversity.edu.in
EMPLOYEE ID	:	1588



• **Academic Profile:**

Qualification	Name of the Board/University	YEAR
Ph.D(Pursuing)	Vellore Institute of Technology, Chennai	--
M. Tech	Jawaharlal Nehru Technological University, Anantapuramu	2013
B. Tech	Jawaharlal Nehru Technological University, Anantapuramu	2009

• **Research Details:**

1. Areas of Specialization	:	Biomaterials, Surface Engineering, Corrosion, Coatings
2. No. of Publications	:	10
3. Awards Received	:	NIL
4. Research Guidance		
	No. of PhD Guided:	Nil
	No. of M.Tech. Guided:	08
	No. of B.Tech. Guided:	18
5. Details of Professional Membership:		MIE, SAE, IAENG
6. Subjects Taught	:	For Undergraduate 1. Engineering Drawing 2. Mechanics of Solids 3. Fluid Mechanics and Hydraulic Machines 4. Design of Machine Elements- I 5. Design of Machine Elements-II 6. Finite Element Method



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	7. Management Science 8. Composite Materials 9. Design Thinking & Innovation 10. Basic Mechanical Engineering For Post Graduate 1. Mechanics of Composite Materials 2. Advanced Mechanisms 3. Industrial Robotics 4. Materials Technology 5. Design for Manufacturing
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• Publication Details:

Title	Publisher	Published Year
1. Enhanced Bioperformance of Micro Arc Oxidation-Coated ZM21 Mg Alloy by Incorporating Silicate-Based Bio Ceramics	Surfaces & Interfaces	2025
2. Optimum Scheduling of a multi-machine FMS with alternative routing using crow search algorithm	SAE	2025
3. A study on the corrosion behaviour and biological properties of MgO/Bredigite composite coating via micro arc oxidation on ZM21 Mg alloy	Materials Chemistry and Physics	2025
4. Improved bioactivity and corrosion resistance of NbO containing plasma electrolytic oxidation coating on ZM21 Mg alloy	Taylor & Francis	2024
5. Waste Heat Recovery from Condenser by using Phase Change Material	International Journal of Vehicle Structures & Systems	2024
6. Review on Characterization and Analytical Measurements for Various Edible and Non-Edible Raw Oil and Biodiesel	International Journal of Vehicle Structures & Systems	2023
7. Geopolymer brick by using flyash, GGBS, Silica Fume and Kadapa slab dust	Int. J. Recent Technol. Eng	2019
8. Ultimate Load Behaviour of Segmental Composite Slabs at Different Shear Connectors	Recent Advances in Material Sciences	2019
9. Bending analysis of composite plates using higher order theory	International Journal of Engineering Science and Technology	2013
10. Design of mathematically defined heterogeneous porous Scaffold architecture for tissue engineering	International Journal of Applied Engineering Research	2011



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• **Funded Projects:**

Title of Project	Funding Agency	Year	Amount in Rs.
1. 3D-Printing of Bioactive Strontium -doped Hardystonite scaffold for Bone-Tissue Engineering	IEI	2024	30,804/-
2. Experimental Investigation of 3D printed nature inspired lattice structures for energy absorption	IEI	2025	31,028/-
3. Mineral Doped Bio Ceramic Coatings on Magnesium Alloy For Enhanced Bone Fixation Via Dip Coating	IEI	2026	50,000/-

• **FDPs Organized:**

Title of Project	Funding Agency	Year	Amount in Rs.
1. ATAL FDP “Advanced Biomaterials for orthopedic and Tissue Engineering Applications”	AICTE ATAL	2025	85,000/-

Academic and Administrative Roles:

1. Timetable In-charge in the Department of Mechanical Engineering From 2012-2014
2. Established Theory of Machines laboratory in 2014
3. Department NBA Coordinator from 2015-2018
4. Department NAAC Coordinator for the Academic Year 2018-2019
5. Member of Board of Studies of Mechanical Engineering from 2014-2016
6. Member Board of Studies of Mechanical Engineering from 2024 to till date
7. Internal Quality Assurance Cell Coordinator from 2019 to till date

Participation in FDPs/STTPs/STC:

1. Attended AICTE Sponsored **one week Staff Development Program** on “ **Recent Trends in Manufacturing Systems**” organised by **Annamacharya Institute of Technology & Sciences, Rajampet** during 30th May-05th June, 2011.
2. Attended AICTE Sponsored **two week Staff Development Program** on “**Computational Intelligence for Modelling and Optimization of Manufacturing System**” organised by Faculty of Mechanical Engineering, **Bannari Amman Institute of Technology, Sathyamangalam** during 6th June- 18th June, 2011.



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3. Attended a three day **Faculty Development Program** on “**CFD Applications Using STAR CCM+**” organised by **JNTUA College of Engineering, Pulivendula** during 16th – 18th January, 2014.
4. Attended a **Two-week Faculty Development Program** on “**Computational Methods for Flow and Heat Transfer Analysis – Applications of CFD Tools**” organised by **JNTUA College of Engineering, Ananthapuramu** during 10th – 23rd March 2014.
5. Attended a **Short-Term Course** on “**Tribology of Soft Matters: Bio-tribology Microsystems and Automotive Applications**” organised by **IIT Delhi** during 07th – 11th November 2016.
6. An AICTE approved **Faculty Development Programme (FDP101x)** on “**Foundation Program in ICT for Education**” conducted by **Indian Institute of Technology Bombay** from August 3, 2017, to September 7, 2017.
7. An AICTE approved **Faculty Development Programme (FDP101x)** on “**Pedagogy for Online and Blended Teaching-Learning Process**” conducted by **Indian Institute of Technology Bombay** from September 14, 2017 to November 20, 2017.
8. An FDP on “**Recent advances in tribology and surface engineering**” conducted by **SAINTGITS College of Engineering** from November 23 to November 28, 2020
9. A **Short-term training program** on “**Additive manufacturing for medical and aerospace applications**” organised by **Shri Vishnu Engineering College** from 4/1/2021 to 9/1/2021.
10. Attended a **Short Term Course** on “**Corrosion and its Control and Characterization**” Organised by **National Institute of Technology, Rourkela** during 13th December 2021 to 17th December 2021.
11. Attended a **Short-Term Training Program** on “**Advanced Material Science and Engineering**” organised by **NITTTR-Kolkata** during 27/12/2021 to 25/12/2021 having registered number as **NITTTRK/ICT/2021-22/06422**.
12. Attended a **QIP Short term course** on “**Additive manufacturing of Biomedical and Aerospace applications**” organised by **IITDM Kancheepuram** during February 21-26, 2022.
13. Participated in “**DST-SERB Sponsored National Workshop on Advances in Materials, Manufacturing and Processing of Bio-Scaffolds for Tissue Engineering Applications**” held at **Vellore Institute of Technology, Vellore** from 27-04-2022 to 01-05-2022.
14. Attended an **ATAL’s Continuous Professional Development programme** on “**Additive and Smart Manufacturing for biomedical Applications**” organised by **IIT Tirupati** during November 14-19 & November 21-25, 2022.



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15. Attended an FDP on “**Advanced technologies for emerging research in Mechanical Engineering**” organized by AITS during 5th December – 09th December 2022.
16. Attended an FDP cum STC on “**Advances in Biomaterials and nanotechnology for biomedical Applications**” during **28th September, to 02nd October 2023** organized by VIT Vellore.
17. Attended an STTP on “**Advances in Material Processing & Design**” during **13th May – 17th May 2024** organized by SVNIT Surat.
18. Attended an FDP on” **Integrated Approaches to composite processing, characterization and applications enabled by effective utilization of modern research tools**” during **23rd February to 27th February 2026** organized by Sethu Institute of Technology, Kariapatti.
19. Participated in **DST-ANRF Sponsored 5 Day Online Workshop on “RECENT ADVANCES IN METAL ADDITIVE MANUFACTURING”** organized by National Institute of Technology, Surathkal from **15th December to 19th December 2025**.

Guest Lecture: 01