S/O MALLESWARARAO PUDIVALASA (VIL) FAREEDHPETA (POST) ETCHERLA (MD) SRIKAKULAM (DIST) ANDRAPRADESH

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#### Career Objective

To be associated with a progressive organization that provides an opportunity to apply my knowledge and skills in order to keep abreast with latest trends and technologies.

#### Academic Credentials

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S.No	Course	Year of Study	College	%		
1	M.Tech (Metallurgy and		National Institute of technology			
	Materials Engineering)	2013-15	Rourkela	82.1		
2	B.Tech (Mechanical Engineering)	2007-11	JNTUK- Vizianagaram Campus.	67.43		
3	Intermediate (MPC)	2005-07	NARAYANA Junior College, Srikakulam	90.01		
4	SSC	2004-05	ZP High School-Kintali	81.83		

Software skills : Origin 8.0

Project (B.Tech) : Completed B.Tech project on "study of multi fuel fired boilers and analysis of feed water heater and their effect on boiler efficiency" at JNTU Vizianagaram, under supervision of Prof. G. Ranga Janardhana.

Project (M.Tech) : Completed M.Tech project on "A new generation fibre reinforced composite for low and cryogenic temperature applications" at NIT Rourkela under supervision of Prof. Rajesh Kumar Prusty and Prof. Bankim Chandra Ray. Job Experience:

• Worked as an Asst. Professor in Mechanical Engineering Department at Sri Sivani College Of Engineering, Srikakulam, and A.P during March 2012-June 2013.

• Currently working as Assistant Professor in Mechanical Engineering Department at MVGR College of Engineering (A), Vizianagaram, A.P from 24-06-2016.

Subjects taught at B.Tech Level:

- Production Technology
- Surface Engineering
- Non-Destructive Testing
- Manufacturing Systems

Projects guided:

• Effect of Heat Treatment on Micro Structure and Mechanical Properties of Medium Carbon Steels.

• Performance of Electromagnetic Governor by Overcoming the Limitations of Mechanical Governor.

- Design and Fabrication of Ornithopter.
- Design and Fabrication of Animatronic Hand.
- Mechanical Behavior of Carbon Nanotubes (CNT) Filled Glass/ Epoxy Composites.

Extra-curricular Activities:

- Participated in "VR1 forever" programme, to educate children in rural areas.
- Volunteered in "food & hospitality" committee in "Ariston 2k9", a national level technical symposium conducted in JNTU-VZM.
- Volunteered in "Inspire science camp-2013 & 14" conducted in NIT-Rourkela.

Achievements:

- Received MHRD scholarship to pursue Post-graduation.
- Qualified national level exam GATE 2012 and 2020
- Ratified by JNTU Kakinada as Assistant Professor.
- Received Best Paper Award in ICRISEM-16 held at SVCET Srikakulam.
- Received Topper Position in Technical Session of ICPCM 2018, NIT Rourkela.
- Received Mentorship certificate from NPTEL.
- Reviewer for Advances in Science, Technology and Engineering Systems(ISSN:2415-6698)

Papers published:

• K K Mahato, M J Shukla, D S Kumar, B C Ray "*In – Service Performance of Fibre Reinforced Polymer Composite in Different Environmental Conditions – A Review*" Journal of Advanced Research in Manufacturing, Material Science & Metallurgical Engineering, Volume 1, Issue 2, 2014.

• M J Shukla, D S Kumar, D K Rathore, R K Prusty, B C Ray, "An assessment of flexural performance of liquid nitrogen conditioned glass/epoxy composites with multi-walled carbon nanotubes." Journal of Composite Materials. (JCM-15-0399).

• D K Rathore, R K Prusty, D S Kumar, B C Ray, "Mechanical performance of CNT-filled glass/fibre epoxy composite in in-situ elevated temperature environments emphasizing the role of CNT content" Journal of Composite Part-A. 84 (2016) page 364-376.

• D. S. Kumar, N.Abhishek, P.Vandana and B.C.Ray, "Fabrication and Testing of Mechanical Properties of Bagasse Natural Fibre Composite" IJCESR Vol.4, issue no 7, Page 32-37, Feb 2017.

• *K.Ravi Kumar D. S. Kumar, G.Pramod Kumar, "Heat Pump Based Energy Efficient Heating and cooling solutions for Automotive Industry."* IJCESR *Vol.4, issue no 11, page 40-51, April 2017.* 

• D. S. Kumar, G.Pramod Kumar, "Mechanical Behavior of CNT Filled Glass / Epoxy Composites in Marine Environment." IJCTST Vol.7, issue no 10, page 20315-321, Oct 2017.

• *P Vandana, T Lakshmana Rao, D S Kumar, " Free vibration analysis of fibre woven glass polymer composites reinforced with carbon nanotubes*" *IJRASET, Vol 9 Issue 4 page 353-360 April 2021.* 

• D. S Kumar, P Vandana "Effect of Mechanical Properties on Glass Fiber reinforced Composites by Incorporating Nano TiO<sub>2</sub> at Acidic Environment" Journal of Advanced Materials Engineering, Vol 6, No 2, 2021.

• *K.A.N.V Swathi Kiran,Amit Kumar Biswakarma,* **D.S Kumar**, *I Sudhakar "The prediction of Churning and windage power losses in High Speed two-stage gearbox via simulation Approach"* Journal of Engineering, Computing and Architecture, Vol 11, Issue 12, Dec 2021 p.p 115-125.

• *P Sai Pranay, S Dhanush, P Charan teja, D S Kumar* "*Experimental Investigation on the frictional behaviour of banana peels composites for brake pad applications, Journal of Advanced Materials Engineering, Vol 11, No 5, 2023.* 

#### Conference proceedings:

• M J Shukla , D S Kumar , K K Mahato , D K Rathore , R K Prusty , B C Ray, "A Comparative Study of the Mechanical Performance of Glass and Glass/Carbon hybrid Polymer Composites at Different Temperature Environments" IOP Conf. Ser. Mater. Sci. Eng., vol. 75, no. 1, p. 012002, Feb. 2015.

• D. S. Kumar, M. J. Shukla, K. K. Mahato, D. K. Rathore, R. K. Prusty, and B. C. Ray, "Effect of post-curing on thermal and mechanical behavior of GFRP composites," IOP Conf. Ser. Mater. Sci. Eng., vol. 75, no. 1, p. 012012, Feb. 2015.

• D. S. Kumar, K.Prema Kumar, K.Dilip Kumar and B.C.Ray, "Fabrication of Advanced Fibre Reinforced Composite Materials and their Cryogenic Behaviour assessment" IJATES Conf. Ser. Vol.4, issue no 2, page 130-136, Feb 2016.

### Conferences:

• Presented a paper entitled "*Effect of post-curing on thermal and mechanical behaviour of GFRP composites*" in the 4<sup>th</sup> National Conference on Processing and characterization of Materials (NCPCM-2014) held at NIT Rourkela Dec 5-6, 2014.

• Presented a paper entitled "*Fabrication of advanced fibre reinforced composite materials and their cryogenic behaviour assessment*" in the 3<sup>rd</sup> International Conference on Recent Innovations in Science, Engineering and Management (ICRISEM-16) held at Sri Venkateswara College of Engineering and Technology Feb 27,2016.

• Presented a paper entitled "*Effect of Mechanical Properties on Glass Fibre reinforced* Composites by incorporating nano  $TiO_2$  under Acidic Environment" in the 1<sup>st</sup> International Conference on Processing and Characterization of Materials (ICPCM-2018) held at NIT Rourkela 6-8 Dec 2018.

Workshops:

• Participated 2-week workshop on Engineering Thermodynamics conducted by IIT Bombay held at NIT Warangal 11-12th Dec, 2012

• Presented poster on 7<sup>th</sup> National Symposium for Materials Research Scholars, MR-15 held by IIT-Bombay, 21-22 May 2015.

• Participated in a one day workshop on *Advanced Characterization Techniques* during 7<sup>th</sup> National Symposium for Materials Research Scholars, MR-15 held at IIT Bombay on 20<sup>th</sup> May 2015.

• Participated in a two day National Level workshop on "Emerging Trends in Automotive" held at MVGR College of Engineering on 1st- 2nd June 2016.

• Participated in a two day National Level workshop on "Mechanical and Electrical Architecture of CNC Machine Tools" held at MVGR College of Engineering on 12th- 13th June 2017.

• Participated in a two day National Level workshop on "Smart and Emerging Materials (SEM -2017)" held at MVGR College of Engineering on 8th- 9th December 2017.

• Participated in One day National Workshop on "Fuel Cell Technology –Opportunities & Challenges" held at MVGR College of Engineering on 29<sup>th</sup> Sep, 2018.

• Participated in a one day National Workshop on "Thin Films in Advanced Technological Applications" held at VIGNAN'S Duvvada, A.P on 2<sup>nd</sup> Nov 2018.

• Participated in One day National Workshop on "Scanning Probe Microscopy" (SPM) held at NIT Rourkela on 5<sup>th</sup> Dec 2018.

# Workshops Conducted:

• Conducted Three Day National Workshop on Non Destructive Testing held at MVGR College of Engineering on 8<sup>th</sup>-10<sup>th</sup> Sep 2018.

### **Faculty Development Programs**

• Participated in a three day national FDP on "Outcome Based Education (OBE-2015)" held at Sri Sivani College Of Engineering on 3-5<sup>th</sup> Dec 2015.

• Participated in a six day Faculty Development Program on "Instructional Design and Delivery System" Organized by NITTTR held at MVGR College of Engineering on 5th – 10th June 2017.

• Participated in a 5 day Faculty Development Program on "Hybrid and Electrical Vehicle Technologies (HVET-2018) held at MVGR College of Engineering on 11<sup>th</sup>-15<sup>th</sup> Dec 2018.

• Successfully completed the course on "*Fundamentals of surface Engineering: Mechanisms, Processes and Characterizations*" with a consolidated score of 80% Organized by **IIT Roorkee** under NPTEL-AICTE in July-Oct 2018.

• Participated in a 5 day Faculty Development Program on "**Technological Advancement of Polymer Nano-composites**", held at **IIT Kanpur** on 4<sup>th</sup>-8<sup>th</sup> April 2019.

• Successfully completed the course on "*Fundamentals of surface Engineering: Mechanisms, Processes and Characterizations*" with a consolidated score of 89% Organized by **IIT Roorkee** under NPTEL-AICTE in July-Oct 2019.

• Participated in a 5 day Faculty Development Program on "**Design for Manufacture and Assembly**" (DFMA), held at **IIT Kanpur** on 10<sup>th</sup>-14<sup>th</sup> Feb 2020.

• Participated in a one week Faculty Development Program on "Machine Learning Applications with R Programming" (MLARP) sponsored by AICTE held at MVGRCE (A) on 05<sup>th</sup>-11<sup>th</sup> March 2020.

• Successfully completed the course on "*Processing of Polymers and Polymer Composites*" with a consolidated score of 87% Organized by IIT Roorkee under NPTEL-AICTE on Jan-April 2020.

- Participated in a Five Day Short Term Course on "Concepts to Commercialization of FRP Composites" Organized by FRP Composites Laboratory held at NIT-Rourkela on 08<sup>th</sup>-12<sup>th</sup> August 2022.
- Participated in a One Week Online Faculty Development Program on "Trends & Challenges in the Development of Electrical Vehicles & Hybrid Electric Vehicles (Series 1)" Organized by LENDI Institute of Engineering and Technology, held from 26<sup>th</sup>-30<sup>th</sup> September 2022.
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# MOOCS

• Successfully completing the online course on "*Machine Design Part 1*" with a consolidated score of 92.25% Organized by Georgia Institute of Technology.

• Successfully completing the online course on "*Materials Science: 10 Things Every Engineer should know*" with a consolidated score of 88.26% Organized by University of California, Davis.

### Internships

• Successfully completed 40 days Faculty Internship Program at "International Advance Research Centre for Powder **Metallurgy and New Materials**" (ARCI)-Hyderabad.

Topic: "Effect of Heating rate on density and hardness of Spark plasma Sintered AODS Steels for nuclear and turbine blade applications".

# Seminars:

• Participated one day National Seminar on Polymer Nanocomposites for Engineering Applications (NCPNEA-2015) held at NIT Rourkela 14<sup>th</sup> March, 2015

• Participated in *SERB* Sponsored two day National Seminar on "Advanced Joining Techniques of Dissimilar Materials for Engineering Applications" held at ANITS, Visakhapatnam on 03<sup>rd</sup>-04<sup>th</sup> Jan 2020.

# Strengths:

• Good analytical skills and comprehensive problem solving ability.

- Flexibility to adopt new technologies and zeal to learn new technologies.
- Positive attitude and enthusiastic in teamwork.

Personal Details

Date of Birth	:	15-07-1990
Father's Name	:	D. Malleswararao
Languages known	:	Telugu, English and Hindi

I hereby declare that the information furnished above is true to the best of my knowledge and belief. DATE: 30-01-2023 Place: Vizianagaram. (D.SANTHOSH KUMAR)