J.PURUSHOTTAM KARTHIK

D.No:2-12-15/2, 2ND Lane, stamabalagarvu, Guntur -522006

Contact: +919392922996, **Email:** chandrakalachari@gmail.com; **Date of Birth**: 26th November 1987

MECHANICAL ENGINEER

Seeking a position in an organization that provides me ample opportunity to explore & excel while carving out the niche for personal, professional as well as organizational goals

SUMMARY OF SKILLS

- Qualified **M. Tech (Mechanical Engineering) with specialization in CAD/CAM from RVRJC College of Engineering Affiliated by Acharya Nagarjuna University;** having an inborn quantitative aptitude & determined to carve a successful and satisfying career in the Lecturer Field**.**
- Worked on the projects **"Design Optimization of Leaf Spring Using Ant- Colony Algorithms"** and **"Fatigue Life Prediction of a Parabolic Spring under Non-constant Amplitude Proportional Loading using Finite Element Method""** as part of the academic curriculum.
- **Well developed communication skills** with reputation of unwavering accuracy, credibility & integrity, exceptional presentation skills with the ability to perform above expectations.

EDUCATIONAL CREDENTIALS

M. Tech (Mechanical Engineering) with specialization in CAD/CAM, 2012

RVRJC College of Engineering Affiliated by Acharya Nagarjuna University; 73%

B.Tech (Mechanical Engineering) with specialization in Industrial Production Engineering, 2009

RVRJC College of Engineering Affiliated by Acharya Nagarjuna University; 62.89%

Intermediate 2005

Board of Intermediate Education, A.P; 68.7%

Matriculation 2003

Board of Secondary Education, A.P; 80.5%

Teaching Experience : **6yrs**

S. No.	Universities/College	Designation	Period
1	RVR&JCCE/ Nagarjuna Uty	Asst. Professor	2-6-2012 onwards
2	PEC/ JNTU	Asst. Professor	10-09-2009 to 10-9-2010

Technical Skills

Designing Software	Auto Cad, Catia – Part design, Assembly, Pro/E – Part design, Assembly, Sheet-metal, Ansys (including Workbench)
Languages	C

Projects Undertaken

Title	**Design Optimization Of Leaf Spring Using Ant- Colony Algorithms**
Description	The project aimed at design optimization of leaf spring which is weight reduction with adequate strength stiffness. Weight reduction of leaf spring will contribute to the reduction of mass. This will help in improving the vibration characteristics and hence, the riding qualities of an automobile. Optimization is the act of obtaining the best result under given circumstances. Conventional design aims at finding an acceptable design which merely satisfies the functional and other requirements of the problem.
Title	**Fatigue Life Prediction of a Parabolic Spring under Non-constant Amplitude Proportional Loading using Finite Element Method**
Description	The project aimed to access the critical fatigue locations on the component due to loading conditions. The effect of mean stress on fatigue life was investigated. Materials SAE1045-450-QT, SAE1045-595-QT and SAE5160-825-QT are considered. The comparison between total-life approach and crack-initiation approach were investigated. It has observed that SAE1045-595-QT material gives constantly higher life than SAE5160-825-QT SAE1045-450-QT material for all loading conditions for both methods. The modeling and finite element analysis was performed using computer-sided design and Ansys (workbench) Fatigue module, to predict the fatigue life.

Book Publications

J.P.Karthik, K.Lakshmi Chaitanya, C.Tarasasanka, published **"***Fatigue Life Prediction of a Parabolic Spring under Non-constant Amplitude Proportional Loading using Finite Element Method",* With **Lambert Academic Publishing House**

Publications

- **J.P.Karthik**, K.Lakshmi Chaitanya, C.Tarasasanka, **"Life** *assessment of parabolic spring under cyclic stress and cyclic strain using Finite element Method",* published in the proceedings of **International Conference on Mechanical and Industrial Engineering (ICMIE)**, conducted by IOAJ, at Bangalore during 22 July 2012. pp: 44-50. ISBN: 978-93-81693-70-4.
- **J.P.Karthik**, K.Lakshmi Chaitanya, C.Tarasasanka, **"** *Life assessment of parabolic spring under cyclic stress and cyclic strain using Finite element Method",* published in **International Journal of Mechanical and Industrial Engineering (IJMIE)**, ISSN No: 2231-6477, vol-2, Issue-1, 2012 pp:36-43.
- **J.P.Karthik**, K.Lakshmi Chaitanya, C.Tarasasanka, **"***Fatigue Life Prediction of a Parabolic Spring under Non-constant Amplitude Proportional Loading using Finite Element Method",* published in **International Journal of Advanced Science and Technology** Vol. 46, September, 2012.
- Dr.D.V.V.Krishna Prasad and **J.P.Karthik** "Prediction of Leaf Spring Parameters Using Artificial Neural Networks" published in International Journal of Engineering Science and Technology (IJEST), 5(5), 1064 – 1069, 2013
- **J.P.Karthik**, D.Manoj Kumar, J.Ranga raya chowdary " Assessment and Comparison of Fatigue Life for Heavy Truck Wheel Rim under Fully Reverse Loading for Aluminium Alloys" published in International Journal of Applied Science and Engineering(IJASE),13(1), 69-80,2015
- **J.P.Karthik**, Rohith Kumar, Singu praneeth "Design and Optimization of Metal Matrix Composite (MMC'S) Spur Gear" published in International Journal of Advanced Design and Manufacturing Technology (ADMT) ,9 (3)
- B. Bhavani, S. Srinivas Prasad, **J.P.Karthik** "Design and Optimization of Locomotive Suspension System Using Ant Colony Optimization" Trends in Machine design 3(2),44-49.

- K. John babu, **J.P.Karthik** "Characterization of Mechanical Properties of Al alloy MMC" International Journal of Research Volume 4(9),1030-1031.

Areas of Interest:

Composite Materials, Manufacturing and Mechanics, Optimization, Finite Element Method,Fatigue & Fracture Mechanics

Subjects Taught:

Engineering Mechanics, Engineering Drawing, Metal Cutting & Machine Tools, Manufacturing Engineering, Mechatronics, Basic Elements of Mechanical Engineering, Mechanics of Fracture and Fatigue, Mechanical Technology

Citations:

Google Scholar-**22;** h-index-**2;** i-index-**1**

Projects Guided:

B.Tech-**6** - M.Tech **3**

Certifications:

- A Hands on Introduction to Engineering Simulation by Cornell University-**d189dc46aabc45088079893d3df814a9**
- Government of INDIA Ministry of Skill Development & Entrepreneurship **-446249167791989440**

Seminars/ Workshops Attended:

- Two weeks Faculty Development Programme on **"Modeling and Optimization of Manufacturing System using Intelligent Techniques"** at BIT sathy, Tamilnadu during the period 6th May to 18th May 2013**.**
- DST sponsored National seminar on **"Futuristic Trends of Nano Composites and their Fabrication",** at R.V.R.& J.C College of Engineering, Guntur on 6th & 7th September 2013.
- Workshop on "**Fracture and Fatigue Mechanics**" at M.S. Ramiah University of Applied Sciences, Bangalore on 24th – 26th April 2014**.**
- Four Week AICTE approved FDP on " **Use of ICT in Education for Online and Blended learning''**, Conducted by IIT Bombay, organized at remote centre R.V.R & J.C College of Engineering, during 2 May 2016 to 10 July 2016.
- One Week Short term course on **Optimization for Engineering Design at IITMadras** on 26th September 2016 to 1st October 2016
- One Week Short term course on **Optimization using MATLAB at RVR&JC College of Engineering** on 17th July – 21st July 2017
- One Week Short term course on **Nonlinear Partial Differential Equations : Theory and Numerics at IITMadras** on 22nd January - 27th January 2018
- One Week Short term course on **Finite element method for engineers from all disciplines at IITMadras** on 26-March-2018- 31st March 2018
- One Week Short term course on **Mechanical Properties and Deformation Behavior of Structural Materials" at IIT(BHU)** Varanasi from 27th August - 1st September 2018.

- **Memberships:**

UAMAE - Member No: AM1009362 **SAE -** Member No**:** 7140413578

IAENG - Member No: 124602 **HKSME** - Member No: m20171220001.

Reviewer/ Editorial Boards:

- Board member in International journal of Engineering Trends and Technology (IJETT) http://www.ijettjournal.org/board-members
- Reviewed for publication in International Journal of Applied Science and Engineering (IJASE)

Languages Known: English, Hindi and Telugu