

# Resume

**Dr. M.L.Pavan Kishore**

Assistant Professor

Department of Mechanical Engineering,

Faculty of Science and Technology, IFHE

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## ***Research Interests:***

*Finite Element Analysis*

*Computational Fluid Dynamics*

*Structural Optimization*

*Composite Structures.*

## ***Education:***

September 2017:

**PhD**

Department of Mechanical Engineering

National Institute of Technology (NIT-Rourkela-Odisha)

Thesis Title: ***Hydrodynamic Design Structural Analysis and Optimization of Marine Propeller Blade.***

Thesis Supervisor: Dr.R.K.Behera.

July 2009 :

**Master of Engineering (ME-Cad/Cam-78%)**

Department of Mechanical Engineering

Chaitanya Bharathi Institute of Technology-Osmania University

Thesis Title: ***Replacement of Marine Propeller Blade with composite Material for Strength Criteria.***

Thesis Supervisor: Dr.P.Ravinder Reddy.





◆ ***Professional recognition, awards, fellowships received:***

- **Gold Medalist** for Topper in ME during 2007-2008 from Chaitanya Bharathi Institute of Technology.
- **Young Achiever Award 2021** from Institute of Scholars, (INSC awards).
- **Doctoral Fellowship** (MHRD, Govt. of India –New Delhi )
- Ratified in JNTU-Anantapur during 2011.
- Achieved silver medal for Essay Writing in Harivillu competition conducted by the Sri Venkateswara University during 2006.
- Achieved gold cup for Volleyball match competition conducted in Intellectual College of Engineering during 2010.

***Membership:***

1. Member American Institute of Aeronautics and Astronautics(AIAA-951561)
2. Member International Association of Engineer (142134)
3. Member Research Engineers and Doctors (SNM10100058640)
4. Life Member The Society of Mechanical & Automotive Engineers (LM 02140)

***Patent Published***

***Details of Patent***

Application No: 202041042280

Applicant Name: Dr.M.L.Pavan Kishore

Title of Invention: Computer implemented system and method to perform structural optimization of marine propeller Blade.

Publication date: 09/10/2020

***Books Published***

M.L.Pavan Kishore, Vedanth Bhatnagar, T.Anirudh “***Effect of Cutout on Free Vibration Analysis of Rectangular Plates***” Lambert Academic Publishing ISBN 978-620-2-79779-5.

Anirudh Tallam, M.L.Pavan Kishore, Vedanth Bhatnagar, “***Numerical Computation for Contact Stress Analysis of Spur Gear***” Lambert Academic Publishing ISBN 978-620-2-92017-9.

## Detailed List of Publications

### Publications in International Journals

- ◆ **M.L.P Kishore, Vijay K Singh, R K Behra, Chandra S Saran, Manikant Paswan, Kapil Kumar**, “Hydrodynamic characteristics of marine composite propeller blade using a numerical approach” *International Journal of Advances in Applied Sciences (IJAAS)*, Vol. 10, No. 1, September 2020, *SCOPUS*.
- ◆ **Anirudh Tallam, Pavan Kishore Mamaduri, Tarkeshwar Appala** “Numerical computation for contact stress analysis of spur gear” *AIP Conf. Proc.* 2283, October 2020, *SCOPUS*.
- ◆ **M.L. Pavan Kishore, T. Anirudh, Vedanth Bhatnagar** “Numerical Study Free Vibration Analysis of Thin Rectangular Plates” *Jour of Adv Research in Dynamical & Control Systems*, Vol. 12, 08-Special Issue, 2020 *SCOPUS*.
- ◆ **Pavan Kishore Mamaduri, Himam Saheb Shaik, Chandra shekhar.A** “Comparative study for material effect on stress behavioural characteristics of rectangular plate” *Vibro Engineering Procedia*. VP .2019.21100, December 2019, *SCOPUS*.
- ◆ **Vedanth Bhatnagar, Pavan Kishore Mamaduri, Sreenivasulu B** “Comparative study for modal analysis of circular plates with various cutouts and end conditions” *Vibro Engineering Procedia*. VP .2019.21162, December 2019, *SCOPUS*.
- ◆ **M.L. Pavan Kishore, A.Chandra shekhar, S.HimamSaheb** “Numerical investigation for influence of pre-twist on stress behavioral characteristics of curved blade” *Vibro Engineering Procedia*. Volume 22 March 2019, *SCOPUS*.
- ◆ **M.L. Pavan Kishore, A.Chandra shekhar, M.Avinash, Raunak Das** “Stress analysis of rectangular and square plates with various cutouts” *Vibro Engineering Procedia*. Volume 22 March 2019, *SCOPUS*.
- ◆ **M.L. Pavan Kishore, Ch. Rajesh, Ram Komawar** “Free vibrational characteristics determination of plates with various cutouts” *Vibro Engineering Procedia*. Volume 22 March 2019, *SCOPUS*.
- ◆ **M.L. Pavan Kishore, D.V.Raghunatha Reddy, M.Sreenivasa Reddy** “Material Effect on Stress Behavioural Characteristics of Composite Rectangular Plate” *IOP Conf. Series: Materials Science and Engineering*, 455 (2018) 012009, *SCOPUS*.

- ◆ **M.L. Pavan Kishore, Srijith S. Donthi, U. Sai Krishna** “Numerical Investigation of a Marine Propeller Blade for Material Effect and Stress Behavioural Characteristics” *International Journal of Vehicle Structures & Systems*,10(1), (2018),18-23, **SCOPUS**
- ◆ **M.L.Pavan Kishore, R.K.Behera**, “Numerical Investigation for CFD Simulation of Open Water Characteristics and Cavitation Inception of Marine Propeller Blade” *Journal of Maritime Research Vol 13 No1* (2017) 71-76, **SCOPUS**.
- ◆ **M.L.Pavan Kishore, B.Sreenivasulu, B.C.Raghu Kumar Reddy** “Base Modal Analysis of Rectangular Plate with Central Hole Subjected to Various End Conditions” *Materials Today Proceedings Elsevier publication Vol 4* ( 2017 ) 1653 – 166, **SCOPUS**.
- ◆ **M.L.Pavan Kishore, R.K.Behera** “Effect of Material Behavior on Dynamic Characteristics Determination of Marine Propeller Blade Using Finite Element Analysis” *Procedia engineering Elsevier publication 144* (2016) 767 – 774, **SCOPUS**.
- ◆ **M.L.Pavan Kishore, R.K.Behera** “Free Vibration Characteristics of Metallic Propeller Blade replaced with Composite material Using Finite Element Approach”. *Applied Mechanics and Materials Vol. 592-594* (2014) pp. 2051-2055, **SCOPUS**.
- ◆ **M.L.Pavan Kishore, R.K.Behera** “Base line study for determination of effect of stacking sequence on Vibration characteristics of composite Propeller Blade” *Science Direct Aquatic Procedia 4 Elsevier publication* ( 2015 ) 458 – 465.
- ◆ **M.L.Pavan Kishore, R.K.Behera** “Effect of Pre twist on Free Vibration Characteristics Determination of Metallic Curved Blade Replaced with Composite Material”. *Journal of Ocean Research*, 2014, Vol. 2, No. 1, 11-16.
- ◆ **M.L.Pavan Kishore, R.K.Behera** “Determination of Optimal Stacking Sequence for Modal Characteristics Evaluation of Composite Marine Propeller Blade”. *Journal of Mechanical Design and Vibration*, 2014, Vol. 2, No. 4, 94-101.

#### National Journals

- ◆ **M.L.Pavan Kishore, R.K Behera** “Determination of Effect Of Stacking Sequence On Strength Evaluation Of Composite Propeller Blade” *International Journal of Scientific Engineering and Technology* (ISSN: 2277-1581).
- ◆ **M.L.Pavan Kishore, R.K.Behera, Sreenivasulu Bezawada** “Harmonic Analysis of Nab Propeller Replaced with Composite Material” *International Journal of Current Engineering and Technology Vol.4, No.2* (April 2014) ISSN 2277 – 4106, P-ISSN 2347 – 5161.

- ◆ **M.L.Pavan Kishore, R.K.Behera** “Replacement of Nab Propeller Blade with Composite for Strength Criteria”. *International Journal of Engineering Science Invention* ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726 PP.42-46.
- ◆ **M.L.Pavan Kishore, R.K.Behera, Sreenivasulu Bezawada** “Structural analysis of NAB Propeller Material” *International Journal of Modern Engineering Research (IJMER)* Vol. 2, Issue. 5, Sep.-Oct. 2012 pp-3390- replaced with Composite 3397, ISSN: 2249-6645.

### Conferences Attended

- ◆ **M.L.Pavan Kishore, R.K.Behera** (2013), *Replacement of Nab Propeller Blade with Composite for Strength Criteria*.”*Advances in modeling and Analysis of Aerodynamic Systems (AMAAS),NIT Rourkela, Odisha, India,1-2 March.*
- ◆ **M.L.Pavan Kishore, R.K.Behera , D.Harsha Vardhan** (2014) “Free Vibration Analysis of Four Bladed Propeller Using Different Materials” *Proceedings of 4<sup>th</sup> SARC International Conference, 30 March-2014, Nagpur, India, ISBN: 978-93-82702-70-2 88.*
- ◆ **M.L.Pavan Kishore, R.K.Behera,** (2014), “Free Vibration Characteristics of Metallic Propeller Blade replaced with Composite material Using Finite Element Approach”, *International Mechanical Engineering Congress (IMEC-2014)”, NIT Tiruchirapalli, Tamilnadu, India,June 13-15 2014.*
- ◆ **M.L.Pavan Kishore, R.K.Behera,** (2014) “Determination of Effect Of Stacking Sequence On Strength Evaluation Of Composite Propeller Blade”,19<sup>th</sup> “*International Conference on Hydraulics, water resources, coastal and environmental Engineering(Hydro 2014)”,MANIT Bhopal, Madhya Pradesh, India , 18-20<sup>th</sup> December,2014.*
- ◆ **M.L.Pavan Kishore, R.K.Behera,** (2015) “Base line study for determination of effect of stacking sequence on Vibration characteristics of composite Propeller Blade” *International Conference on Water Resources ,Coastal and Ocean Engineering(ICWRCOE- 2015), NIT Surathkal, Karnataka, India,12-14<sup>th</sup> March 2015.*
- ◆ **M.L.Pavan Kishore, R.K.Behera,**(2015) “Effect of Material Behaviour on Dynamic Characteristics Determination of Marine Propeller Blade Using Finite Element Analysis” *12<sup>th</sup> International Conference on Vibration Problems(ICOVP 2015), , IIT Guwahati, India, 14-17<sup>th</sup> December 2015.*
- ◆ **M.L.Pavan Kishore, B.Sreenivasulu, B.C.Raghu Kumar Reddy** (2016) “Base Modal Analysis of Rectangular Plate with Central Hole Subjected to Various End Conditions” *5<sup>th</sup> International Conference on Material Processing and Characterization(ICMPC 2016), GRIET Hyderabad, India, 12-13<sup>th</sup> March 2016.*

- ◆ **M.L.Pavan Kishore, B.Sreenivasulu, A. Manmadhachary, K.Venkata Subbaiah** (2016) “Numerical Investigation for CFD Simulation on Open Water Characteristics Determination of Marine Propeller Blade” *International Conference on Design and Manufacturing (ICONDM-2016)*, IIT Kancheepuram, India, 15-17<sup>th</sup> December 2016.
- ◆ **M.L.Pavan Kishore, Srijith, S. Donthi, U. Sai Krishna** “Numerical Investigation of a Marine Propeller Blade for Material Effect and Stress Behavioural Characteristics” Recent Advances in Aerospace Engineering”(ICRAAE 2017), Karunya University, Coimbatore, India, 03-4<sup>th</sup> March 2017.

### **Workshop Attended**

- ◆ *One Day National Workshop on “MATERIALS FOR THE FUTURES” 8<sup>th</sup> October 2010 Madanapalle Institute of Technology and Science Madanapalle.*
- ◆ *One day National level workshop on “RECENT ADVANCES IN MECHANICAL ENGINEERING” 24<sup>th</sup> Sept 2011, Madanapalle Institute of Technology and Science Madanapalle.*
- ◆ *Two Day International Workshop on “COMPOSITES DESIGN & ANALYSIS USING FEM” 21<sup>st</sup> & 22<sup>nd</sup> December 2012. Madanapalle Institute of Technology and Science Madanapalle.*

### **Courses handled**

1. *Engineering Mechanics*
2. *Design of Machine Elements*
3. *Finite Element Methods*
4. *Computational Fluid Dynamics*
5. *Workshop Practice*
6. *Cad/Cam*

### **Administrative Positions**

1. *Departmental Committee member of Curriculum Development*
2. *Departmental Co-ordinator of Winter Internship Programme 2018-2019*
3. *Departmental Co-ordinator of Summer Internship Programme 2018-2019*



4. Departmental Research Committee Member

5. Faculty in-charge for multi section course Engineering Mechanics 2017-2018.

**Details of B-Tech Projects**

<u>Name of the Student</u>	<u>Title of the Thesis</u>	<u>Status</u>	<u>Year</u>
C.Keerthana	Static Stress Analysis of Simply supported Beam with multiple loads	Completed	2021
Nitish Kumar	Material behaviour effect on Structural behaviour Characteristics of Cantilever beam.	Completed	2021
B.Vedanth	Forced Vibration analysis of Sandwich beams	Completed	2020
T.Anirudh	Crack propagation effect on free vibration Analysis of circular plates.	Completed	2020
B.Vedanth	Comparative study for modal analysis of Circular plates with various cutouts and End conditions.	Completed	2019
T.Anirudh	Numerical computation for contact stress Analysis of spur gear.	Completed	2019
Ram Komawar	Free Vibration analysis of rectangular and Square plate with different central cutouts.	Completed	2018
Raunak Das	Stress analysis of rectangular and square Plate with various cutouts.	Completed	2018
Krishna Mohan Reddy	Design and Fabrication of Spur gear for Contact stress analysis.	Completed	2018
Vipin Bharadwaj	CFD analysis of centrifugal pump impeller Blade at different angles of attack.	Completed	2018

Abhishek	Pre-twist effect on Free Vibration Characteristics Determination of Metallic Curved Blade replaced with Composite Material.	Completed	2017
Bhavindra Rathore	Static analysis of wind turbine blade using Conventional and composite materials.	Completed	2017

### **Sponsor Project**

SNo	Title of the Project	Cost (Lakh)	Agency	Status
1	Forced Vibration Analysis of different Visco-elastic sandwich beams.	2	IFHE	Ongoing
2	Structural optimization of composite blade for aircraft applications.	2	IFHE	Completed
3	Design of Test Bed Facility at Jagadapur ---		DRDO	Completed

### **Personal Profile**

Name : Dr.M.L.PavanKishore.

Date of Birth : 1<sup>st</sup> April, 1983.

Gender : Male.

Marital Status : Married.

Languages Known : Telugu, English and Hindi.

Nationality : Indian.-Hindu.

Mailing Address : Plot No-159, flat no-301, SNR Nilayam, Jaynagar  
Colony, KPHB, HYDERABAD-500072

Permanent Address : D.NO.5/111A, (Plot No-10B), Auditors colony,  
Chinmayanagar, Parsanaiah pally, ANANTAPUR- 515002  
(AP) INDIA.

## **DECLARATION**

I do hereby declare that the above information given by me is true to the best of my knowledge and belief. I look forward to prove my competence and worth.

Date:

Place: Hyderabad

**(Dr.M.L.Pavan Kishore)**