

***Curriculum Vitae***

**Dr Subrata Kumar Panda**

**Professor**

Department of Mechanical Engineering, NIT Rourkela, Rourkela: 769008, Odisha

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**Adjunct Professor** at the University Centre for Research and Development (UCRD), Chandigarh University, Chandigarh (India).

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**World 2% Scientist in Consecutive Years 2021, 2022 and 2023 (Career and Yearly List):** [**https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4**](https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4)

**Best Mechanical and Aerospace Engineering Scientists in India**

**Link:** [**https://research.com/scientists-rankings/mechanical-and-aerospace-engineering/in**](https://research.com/scientists-rankings/mechanical-and-aerospace-engineering/in)

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| --- | --- | --- |
| **YEAR** | **INDIAN RANK** | **WORLD RANK** |
| **2021** | **22** | **1057** |
| **2022** | **41** | **1659** |
| **2023** | **41** | **1659** |

***Research Interests*:**

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| * Nonlinear Solid Mechanics * Smart Composite Structures * Nonlinear FEM * Experimental Vibration * Vibro-acoustic Analysis of Laminated Structure * Functionally Graded Material * Energy harvesting devices * Hydrogen storage material modelling * Bio-mimic material for self-healing * Rehabilitation Engineering * GAIT Analysis | * SMA, PZT and Magneto-strictive material * Structural Optimisation, Optimisation Technique * Multi-scale Modelling * Scale effect * Nano/Micro mechanical Modelling of CNT and Graphene * Damage modelling of Laminated Structure * Bio-Mechanical Analysis of Functional Materials * Machine Learning * Renewable Energy Material and Structure |
| * **Self-Healing** | * **AI and ML applications in SHM** |
| * **Vision/Data Based Model** | * **Python code based Model development** |

**Relevant research profile links:**

1. SCOPUS Author ID: 55589286600
2. ORCID ID: [0000-0001-8841-7449](http://orcid.org/0000-0001-8841-7449)
3. Research ID: **N-4301-2017**
4. [**https://scholar.google.co.in/citations?hl=en&user=1fvrY4UAAAAJ**](https://scholar.google.co.in/citations?hl=en&user=1fvrY4UAAAAJ)
5. <https://www.researchgate.net/profile/Dr_Subrata_Panda>
6. [**https://www.youtube.com/channel/UC0XvPm5pbhPv\_G\_g-HzkqdA**](https://www.youtube.com/channel/UC0XvPm5pbhPv_G_g-HzkqdA) **(Teaching)**

***Education*:**

July-2010 **Ph.D.**

Department of Aerospace Engineering

Indian Institute of Technology Kharagpur

Thesis Title: “***Nonlinear Vibration Analysis of Thermally***

***Post-buckled Composite Shell Panels with and without Shape***

***Memory Alloy Fibres*”**

**Supervisor:** Dr. Bhrigu Nath Singh, Professor

July-2005 **Master of Engineering (Engineering Mechanics with 81%)**

Department of Applied Engineering and Mechanics and Drawing

Bengal Engineering and Science University, Shibpur (HWH), WB,

India.

Thesis Title: “***Development of an Optical Imaging System Suitable to Measure Body Contact Pressure****”*

**Supervisor:** Dr. Jayanta Kumar Chakravorty, Professor

July-2001 **Bachelor of Engineering (Mechanical Engineering with 73%)**

Department of Mechanical Engineering

C. V. Raman College of Engineering, Utkal University, (Orissa)

Project Title: **“*Dynamic Behaviour Analysis of Turbine Rotor***

***Bearing System by Transfer Matrix Method*”**

**Project Supervisor:** Mr. P. Mohapatra, Professor

***Ph.D. Thesis*: *Nonlinear Vibration Analysis of Thermally Post-buckled Composite Shell Panel with and without Shape Memory Alloy Fibres***.

***Abstract:*** A nonlinear higher-order mathematical model has been developed to compute the layered structure's eigenvalues (linear and nonlinear) under the elevated thermal environment. Further, the parent structural strength has been improved by taking the advent of the functional material fibre's blocking stress effect. The model consists of two types of nonlinearities (geometry and material) to count the large geometrical distortion and modified material versatility via Green-Lagrange strain kinematics and marching techniques, respectively. Moreover, the current type of geometrical nonlinear model considering all the mid-plane higher-order strains is included in the present model to achieve the generality. The computational solutions are obtained via in-house MATLAB code using the presently derived higher-order model and compared with those of the published data to show the model efficacy. Finally, numerical examples are computed by extending the current model by varying the input parameters with and without embedding the shape memory alloy fibres. The current frequency, buckling/post-buckling and frequencies in the post-buckled regime are discussed in detail for the future reference of the design engineers.

***Total Experience:* 19.8 Years**

**1. Teaching Experience 15.10 Years**

Position: Lecturer in Mechanical Engineering

Institute: CV Raman College of Engineering,

Bhubaneswar, Orissa, India

Period: 2001-2003

Position: **Assistant Professor** in School of Mechanical Engineering

Institute: KIIT University, Bhubaneswar, Odisha, India

Period: **5thApril 2010 to 30th June 2011**

Position: **Assistant Professor** in Department of Mechanical Engineering

Institute: National Institute of Technology Rourkela, Odisha, India

Period: **1st July 2011 to 29th Jan 2014 Professor (Assistant)**

**30th Jan 2014 to 1st Feb 2018 Professor (Assistant)**

**2nd Feb 2018 to 28th March 2023 Professor (Associate)**

Position: **Professor** in Department of Mechanical Engineering

Institute: National Institute of Technology Rourkela, Odisha, India

Period: **29th March 2023 to Continuing**

**2. Research Experience 3 Years 10 months**

Position: Senior Research Fellow

Institute: IIT Kharagpur, Kharagpur: 721302, West Bengal.

Period: March 2006 to Jan 2010

Research Area:Nonlinear Structural Analysis

***Software Skills*:**

Languages: FORTRAN

Operating systems: Windows 98/2000/XP/Windows 7/Vista

Software tools: MATLAB, ANSYS, IMAGE Pro-Discovery, ABAQUS, SOLIDWORKS, DIGIMAT

Graphics Software: Origin, XL

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

1. Silver Medal for standing first in first in Masters.
2. SRF Fellowship (Defence Research and Development Organisation, New Delhi, India)
3. SRF Fellowship (AR & DB, DRDO, NEW Delhi, India)
4. Member International Association of Engineer (169150)
5. Member Institute of Engineers (M-155016-5)
6. Member of Hong Kong Society of Mechanical Engineers (M20161213001)
7. ‘COSMIC OUTSTANDING RESEARCH AWARD-2017’ for contribution in the field of Applied Research at AETM Conference-2017 Thailand.
8. "Best Technical Paper" in the field of Computer Aided Design Applications in Engineering during 58th Annual Technical Session at Institute of Engineers, Odisha state centre on 16th February 2017.
9. Technical Annual Award "Er Raj Kishore Mahapatra Award" to the paper titled “Vibroacoustic Behaviour of Unbaffled Laminated and Sandwich Composite Spherical Shell Panels in Thermal Environment.” during 59th Annual Technical Session at Institute of Engineers, Odisha state centre on 21st January 2018. (Contributor Dr. T. R. Mahapatra, Mr. N. Sharma)
10. *NITRAA Research Excellence Award in the Mechanical Engineering Sciences Category 13th April 2019*.
11. *Odisha Technocrat Award* in Odisha Technological Conclave 2023, September 15th.
12. *Best Reviewers* in the year 2023 from Transactions of Indian Institute of Metals, Springer Publisher with 250 Euros coupon.

***Publications:***

**Published/Accepted in International Journals**

1. Hirwani, C. K., Kumar, R., Kumar, E. K., and **Panda, S. K.,** (**2024**), Nonlinear Deflection Characteristics of Weakly Bonded Curved Composite Structure under Hygro-thermo-mechanical Loadings, **International Journal of Applied Mechanics**, **(Accepted), (IF: 3.5),** **SCIE and SCOPUS**.
2. Kumar, E. K., Pattanayak, P. and **Panda, S. K.,** (**2024**), Large Deformation Dynamic Characteristics of Cracked Laminated Panel and Improvisation of Stiffness using Shape Memory Alloy (SMA) fibre, **Journal of Pressure Vessel Technology, (Accepted), (IF: 1.0), SCIE and SCOPUS**.
3. Kumar, E. K., Patel, S. S., **Panda, S. K.,** Patle, B. K.,Makki, E.,and Giri, J., (**2024**), A Comprehensive Exploration of Shape Memory Alloys (SMA): Fundamentals, Structural Reinforcements, Nano Analysis, Machine Learning Perspective and Emerging Applications, **Mechanics of Advanced Materials and Structures,** **(Accepted), (IF: 2.8), SCIE and SCOPUS**.
4. Kumar, E. K., Pattanayak, P., Biswas, S., **Panda, S. K.,** and Mahmoud, S. R., (**2023**), Dynamic Analysis of SMA Reinforced Damaged Layered Panel: Reversal of Structural Stiffness, **AIAA Journal,** **(Accepted), (IF: 2.624), SCIE and SCOPUS**.
5. Akkasali, N. K., Biswas, S., and **Panda, S. K.,** (**2023**), Damage (Delamination and Crack) Effect on Frequency and Strain Energy Release Rate (SERR) in Adhesively Bonded Multi-Material Single Lap Joint-An Experimental Verification, **Acta Mechanica**, **(Accepted), (IF: 2.7), SCI, SCIE and SCOPUS**.
6. Mehar, K., Kumar, E. K., Patle, B. K., **Panda, S. K.,** Biswas, S., and Devarajan, Y., (**2023**), Thermoelastic Frequency Prediction of Nanotube-Reinforced Graded Smart (Shape Memory Alloy-Reinforced) Sandwich Structure, **Journal of Vibration Engineering & Technologies**, **(Accepted), (IF: 2.33), SCIE and SCOPUS**.
7. Singh, P., Kourav, P. S., Mohapatra, S., Kumar, V, **Panda, S. K.** (**2023**), Human Heart Health Prediction using GAIT Parameters and Machine Learning Model, **Biomedical Signal Processing & Control**, **(Accepted), (IF: 5.1), SCIE and SCOPUS**.
8. Mishra, P. K., Padhee, N., Panda, S. K., and Kumar, E. K., **Panda, S. K.** (**2023**), Free Vibration Frequency Prediction to Design Optimum Adhesively Bonded Double Lap Joint, **Journal of Vibration Engineering & Technologies**, **(Accepted), (IF: 2.33), SCIE and SCOPUS**.
9. Kumar, V., Gangwar, A., Pattanayak, P., **Panda, S. K.** and Pandey, H. K. (**2023**), Computational Modelling and Prediction of Elasto-Plastic Constitutive Behaviour of Damaged Polymeric Structure under High-Strain Loadings, **Applied Physics A**, **(Accepted), (IF: 2.7), SCI, SCIE and SCOPUS**.
10. Kumar, K, E., **Panda, S. K**., Biswas, S, Mahmoud, S. R. and Balubaid, M.,(**2023**), Theoretical Evaluation of Nonlinear Thermomechanical Deflection Characteristics of Damaged (Cracked) Layered Composite Structural Panel Bonded with Shape Memory Alloy (SMA) Fibre and Experimental Verification, **Mechanics of Advanced Materials and Structures, (Accepted), (IF: 2.8), SCIE and SCOPUS.**
11. Mishra, P. K., Panda, S. K., Pati, S. N, Kumar, K, E., and **Panda, S. K.**, (2023), Minimization of Delamination Effect on Laminated Composite Plates using Functional Materials (Piezoelectric and Magnetostrictive), **Mechanics Based Design of Structures and Machines, An International Journal (Accepted), (IF: 3.9), SCIE**.
12. Meher, A. K., Kumar, K, E., Gangwar, A., **Panda, S. K**. and Pradhan, R. C., (**2023**), Review on Mechanobiological Analysis and Computational Study of Human Tissue (Soft and Hard) using Machine Learning Techniques: A Mechanical Perspective, **Archives of Computational Methods in Engineering, (Accepted), (IF: 9.7), SCIE and SCOPUS.**
13. Sharma, N., Mohapatra, S., Kumar, K, E., **Panda, S. K.**, (**2023**), Numerical Aeroelastic Flutter Prediction of Variable Stiffness Laminated Panels with Curvilinear Fiber in Supersonic Flow, **Structures**, (**Accepted**), (**IF: 4.1**), **SCIE and SCOPUS**.
14. Satapathy, R., P., K., Kumar, K., Hirwani, C., K, Kumar, V., Kumar, K., E., and **Panda, S. K**., (**2023**), Computational Deep Learning Algorithm (Vision/Frequency Response) Based Damage Detection in Engineering Structure, **Acta Mechanica**, **(Accepted), (IF: 2.7), SCI, SCIE and SCOPUS.**
15. Kumar, K, E., Meher, A. K., Kumar, V., Sharma, N., Dewangan, H. C., Katariya, P. V., and **Panda, S. K**., (**2023**), Numerical Prediction of Thermoacoustic Responses of CNT Reinforced Natural (Luffa) Fibre/Epoxy Hybrid Composite and Experimental Verification, **Applied Acoustics, (Accepted), (IF: 3.1), SCIE and SCOPUS.**
16. Kumar, V., Kumar, V., Kumar, K, E., Gangwar, A., and **Panda, S. K**. (**2023**), Acoustic Emission Based Structural Health Prediction and Monitoring: A Comprehensive Review, **International Journal of Applied Mechanics, (Accepted), (IF: 3.5), SCIE and SCOPUS.**
17. Kumar, K, E., Kumar, V., **Panda, S. K**., Sharma, N., Dewangan, H. C., and Meher, A. K., (**2023**), Theoretical and Experimental Vibroacoustic Analysis of Advanced Hybrid Structure (CNT/Luffa/Epoxy), **Acta Mechanica**, **(Accepted), (IF: 2.7), SCI, SCIE and SCOPUS.**
18. Satankar, R. K., Sharma, N., Katariya, P. V., Kumar, V., Dewangan, H. C., Pal, A., and **Panda, S. K**., (**2023**), Computational Modelling and Analysis of Thermoacoustic Behaviour of Carbon Nanotube-Reinforced Plant Fibre Epoxy Composite – An Extensive Review, **Materials Today Communications**, **(Accepted), (IF: 3.8), SCIE and SCOPUS.**
19. Thomas, L. C., Kumar, V., Gangwar, A., Pisupati, M. Gupta, C. and **Panda, S. K**., (**2023**), Computational Modelling and Experimental Techniques for Fibre Metal Laminate Structural Analysis: A Comprehensive Review, **Archives of Computational Methods in Engineering, (Accepted), (IF: 9.7), SCIE and SCOPUS.**
20. Ramteke, P. M., Tiwari, S., Kumar, E. K., Sharma, N., Hirwani, C. K., **Panda, S. K**., Mahmoud, S. R., Gupta, P., and Balubaid, M., (**2023**), Green Waste Energy (Vibration and Wind) Hybrid Harvester Design and Analysis using Analytical and 3D Finite Element Method, **Journal of Vibration Engineering & Technologies, (Accepted), (IF: 2.7), SCIE and SCOPUS.**
21. Ramteke, P. M., Sharma, N., Dwivedi, M., Das, S. K., Uttarwar, C. R., and **Panda, S. K**., (**2023**), Theoretical Thermoelastic Frequency Prediction of Multi (Uni/bi) Directional Graded Porous Panels and Experimental Verification, **STRUCTURES (Accepted), (IF: 4.01), SCIE and SCOPUS.**
22. Kumar, V., Dewangan, H. C., Sharma, N., **Panda, S. K.**, and Mahmoud, S. R., (**2023**), Computational Modelling and Analysis of Damaged Layered Structure under Variable Loading/Scale effect and Performances– A State of Art Review, **Archives of Computational Methods in Engineering, (Accepted), (IF: 8.171), SCIE and SCOPUS**
23. Kumar, V., Dewangan, H. C., Sharma, N., **Panda, S. K.**, and Mahmoud, S. R., (**2023**), Nonlinear Modal Responses of Doubly Curved Damaged Shell Structure: Numerical Prediction and Experimental Validation, **(Accepted) Structures**, **(IF: 4.010), SCIE, and SCOPUS**
24. Ramteke, P. M., and **Panda, S. K**., (**2023**), Nonlinear Thermomechanical Static and Dynamic Responses of Bidirectional Porous FG Shell Panels and Experimental Verifications, **Journal of Pressure Vessel Technology, ASME, (Accepted), (IF:), SCIE and SCOPUS.**
25. Ramteke, P. M., and **Panda, S. K**., (**2023**), Computational Modelling and Experimental Challenges of Linear and Nonlinear Analysis of Porous Graded Structure: A Comprehensive Review, **Archives of Computational Methods in Engineering, (Accepted), (IF: 8.171), SCIE and SCOPUS.**
26. Badal, R., Jena, S., Pisupati, M., Kumar, E. K., Kumar, V., and **Panda, S. K.**, (**2023**), Multiphysics (Stress and Deformation) Behaviour of Stented Bifurcated Coronary Artery (Soft Tissue) under Pulsatile Flow Condition, **Journal of Vibration Engineering & Technologies, (Accepted), (IF: 2.333), SCIE and SCOPUS.**
27. Kumar, V., **Panda, S. K.**, Dwivedi, M., Mahmoud, S. R. and Balubaid, Md., (**2023**), Nonlinear Modal Responses of Doubly Curved Damaged Shell Structure: Numerical Prediction and Experimental Validation, IMechE Part C: **AIAA Journal, (Accepted),** **(IF: 2.295)**, **SCI and SCOPUS.**
28. Ramteke, P. M., and **Panda, S. K**., (**2023**), Nonlinear Static and Dynamic Deflection/Stress Behaviour of Porous Functionally Graded Shell Panel and Experimental Validation, IMechE Part C: **Journal of Mechanical Engineering Science, (Accepted),** **(IF: 1.758)**, **SCIE and SCOPUS.**
29. Ghandehari, M. A. Masoodi A. R., and **Panda, S. K.** (**2023**), Thermal frequency analysis of double CNT-reinforced polymeric straight beam, **Journal of Vibration Engineering & Technologies, (Accepted),** **(IF: 2.333)**, **SCIE and SCOPUS.**
30. Sharma, N., Mohapatra, S., Kumar, K, E., **Panda, S. K.**, (**2023**), Geometrically Nonlinear Aeroelastic Flutter Characteristic of Laminated Composite Shell Panels under Supersonic Flow, **International Journal of Applied Mechanics**, (**Accepted**), (**IF: 3.951**), **SCIE and SCOPUS**.
31. Dewangan, H. C., **Panda, S. K.**, Sharma, N., Mahmoud, S. R., Harursampath, D. K., Mahesh, V. and Balubaid, Md., (**2022**), Thermo-Mechanical Large Deformation Characteristics of Cutout Borne Multilayered Curved Structure: Numerical Prediction and Experimental Validation, **International Journal of Non-Linear Mechanics,** (**Accepted: 3.336)**, **(IF:)**, **SCI and SCOPUS**.
32. Patel, S. S., Kumar, K, E., **Panda, S. K**., Sharma, N., **(2022)**, State of Art Review on Computational Modelling and Analysis and Making of Brain Phantom, **Archives of Computational Methods in Engineering** (**Accepted)**, **(IF: 8.171)**, **SCIE and SCOPUS**.
33. Kumar, K, E., **Panda, S. K**., Dwivedi, M., Mahmoud, S. R., and Balubaid, Md., **(2022)**, Numerical Thermal Frequency Prediction of Smart Composite Structure and Experimental Validation, **STRUCTURES** (**Accepted)**, **(IF: 4.01)**, **SCIE and SCOPUS**.
34. Ramteke, P. M., and **Panda, S. K**., **(2022)**, Nonlinear Static and Dynamic Response Prediction of Bidirectional Doubly-Curved Porous FG Panel and Experimental Validation, **Composites Part A: Applied Science and Manufacturing** (**Accepted)**, **(IF: 9.463)**, **SCIE and SCOPUS**.
35. Kumar, K, E., **Panda, S. K**., Mahmoud, S. R., and Balubaid, Md., **(2022)**, Influence of Active SMA Fibre on Deflection Recovery Characteristics of Damaged Laminated Composite Theoretical and Experimental Analysis, **Fibers and Polymers** (**Accepted)**, **(IF: 2.153)**, **SCIE and SCOPUS**.
36. Pal, R., Chaudhury, M., Dewangan, H. C., Hirwani, C. K., Kumar, V. and **Panda, S. K**., **(2022)**, Numerical Frequency Prediction of Combined Damaged Laminated Panel (Delamination Around Cut-out) and Experimental Validation, **Journal of Vibration Engineering & Technologies,** [**http://doi.org/10.1007/s42417-022-00812-5**](http://doi.org/10.1007/s42417-022-00812-5) **(Accepted),** **(IF: 2.333)**, **SCIE and SCOPUS.**
37. Bondla, S., Sharma, N., **Panda, S. K.**, Hirwani, C. K., Mahmoud, S. R., and Kumar, V. (**2022**), Uncertain Frequency Responses of CNT- Reinforced Polymeric Graded Structure using Fuzzyfied Elastic Properties- Fuzzy Finite Element Approach, **Waves in Random and Complex Media** (**Accepted**), (**IF: 4.853**), [**https://doi.org/10.1080/17455030.2022.2147599**](https://doi.org/10.1080/17455030.2022.2147599) **SCI, SCIE and SCOPUS**.
38. Kumar, V., **Panda, S. K.**, Mahmoud, S. R. and Balubaid, Md., **(2022)**, Numerical Investigation of Transient Thermo-Mechanical Loading Effect on Combined Damaged (Crack and Delamination) Curved Shell Structure: An Experimental Verification, Ocean Engineering, (Accepted), (**IF: 4.372**), [**https://doi.org/10.1016/j.oceaneng.2022.113009**](https://doi.org/10.1016/j.oceaneng.2022.113009) **SCI and SCOPUS**.
39. Dewangan, H. C., **Panda, S. K.**, Mahmoud, S. R., Harursampath, D. K., Mahesh, V. and Balubaid, Md., (**2022**), Review on Linear and Nonlinear Structural Responses Laminated Composite Flat/Curved Panels with and without Cutout under Thermo-Mechanical Loading, **Acta Mechanica**, (**Accepted**), (**IF: 2.698**), **SCI, SCIE and SCOPUS**.
40. Dewangan, H. C., **Panda, S. K.** and Sharma, N., (**2022**), Review on Linear and Nonlinear Structural Responses Laminated Composite Flat/Curved Panels with and without Cutout under Thermo-Mechanical Loading, **Composite Structures**, (**Accepted**), [**https://doi.org/10.1016/j.compstruct.2022.116340**](https://doi.org/10.1016/j.compstruct.2022.116340) (**IF: 6.603**), **SCI and SCOPUS**.
41. Kumar, K, E., Patel. S. S., Kumar, V, **Panda, S. K.**, Mahmoud, S. R., and Balubaid, Md., (**2022**), State of Art Review on Applications and Mechanism of Self-Healing Materials and Structure, **Archives of Computational Methods in Engineering**, (**Accepted**), **10.1007/s11831-022-09827-3** (**IF: 8.171**), **SCIE and SCOPUS**.
42. Kumar, P., Arya, R., Sharma, N., Hirwani, C. K., and **Panda, S. K**., **(2022)**, Influence of Variable Stiffness on Frequency Responses of Curved Fibre-Reinforced Composite Panel, **Journal of Vibration Engineering & Technologies, (Accepted),** **(IF: 2.333)**, **SCIE and SCOPUS.**
43. Kumar, K, E., Sharma, N., **Panda, S. K,** and Mahmoud, S. R. **(2022)**, Numerical Prediction of Thermal Buckling Load Parameters of Damaged Polymeric Layered Composite Structure and Reversal of Strength using SMA fibre, **Archive of Applied Mechanics (Accepted), (IF: 1.976), SCI, SCIE and SCOPUS.**
44. Sahoo, B., Sharma, N., Sahoo, B., Ramteke, P. M., **Panda, S. K.** and Mahmoud, S. R. **(2022)**, Nonlinear Vibration Analysis of FGM Sandwich Structure under Thermal Loadings, **Structures**, [**https://doi.org/10.1016/j.istruc.2022.08.081**](https://doi.org/10.1016/j.istruc.2022.08.081) **(IF: 4.010), SCIE, and SCOPUS**
45. Hissaria, P. Ramteke, P. M., Hirwani, C. K., Mahmoud, S. R. and Kumar, K, E., **Panda, S. K., (2022),** Numerical Investigation of Eigenvalue Characteristics (Vibration and Buckling) of Damaged Porous Bidirectional FG Panels, **Journal of Vibration Engineering & Technologies,** [**https://doi.org/10.1007/s42417-022-00677-8**](https://doi.org/10.1007/s42417-022-00677-8)**,** **(IF: 2.333)**, **SCIE and SCOPUS.**
46. Choudhary, J., Patle, B. K., Ramteke, P. M., Hirwani, C. K., **Panda, S. K.** and Katariya, P. V., (**2022**), Static and Dynamic Deflection Characteristics of Cracked Porous FG Panels, **International Journal of Applied Mechanics,** [**https://doi.org/10.1142/S1758825122500764**](https://doi.org/10.1142/S1758825122500764)**,** **(IF: 3.224)**, **SCIE and SCOPUS.**
47. Kumar, V, Dewangan, H. C., Sharma, N., **Panda, S. K.** and Mahmoud, S. R. (**2022**), Nonlinear Dynamic Behavior of Damaged Laminated Shell Structure under Time-Dependent Mechanical Loading, **Acta Mechanica**, [**https://doi.org/10.1007/s00707-022-03341-0**](https://doi.org/10.1007/s00707-022-03341-0), (**IF: 2.698**), **SCI, SCIE and SCOPUS**.
48. Kumar, V, Kumar, K, E., Dewangan, H. C., Sharma, N., **Panda, S. K.** and Mahmoud, S. R. **(2022)**, Strain Rate Loading Effects on Fibre-Reinforced Polymeric Composites with and without Damage: A Comprehensive Review, **Transactions of Indian Institute of Metals** [**https://doi.org/10.1007/s12666-022-02728-w**](https://doi.org/10.1007/s12666-022-02728-w), **(IF: 1. 391)**, **SCIE and SCOPUS**.
49. Srivastava, L., Krishnand L., Nath, N. K., Hirwani, C. K. and **Panda, S. K**., **(2022)**, Effect of Blast Load on Dynamic Deflection Responses of Internally Damaged Carbon-Epoxy Laminated Composite Shallow Shell Panel using Experimental Properties, **Transactions of Indian Institute of Metals** [**https://doi.org/10.1007/s12666-022-02698-z**](https://doi.org/10.1007/s12666-022-02698-z), **(IF: 1. 391)**, **SCIE and SCOPUS**.
50. Katariya, P. V, Hirwani, C. K. and **Panda, S. K.**, **(2022)**, Large Amplitude Hygrothermal Dependent Frequency and Post-Buckling Behaviour of Smart Skew Sandwich Shell Panel - A Macromechanical FE Approach, **Fibers and Polymers** (Accepted), **(IF: 2.153)**, **SCIE and SCOPUS**.
51. Kumar, V, Dewangan, H. C., Sharma, N. and **Panda, S. K.** **(2022)**, Numerical and Experimental Deflection Behavior of Damaged Doubly Curved Composite Laminated Shell Structure, Archive of Applied Mechanics [**https://doi.org/10.1007/s00419-022-02202-5**](https://doi.org/10.1007/s00419-022-02202-5)**,** (**IF: 1.976**), SCI, SCIE and SCOPUS
52. Hirwani, C. K., Tiwari, S., Mishra, P. K., Dewangan, H. C. and **Panda, S. K.**, **(2022)**, Numerical Hygrothermal Frequency of Pre-Damage Shallow Shell Panel -A Nonlinear FE Approach, **Waves in Random and Complex Media** (Accepted), **(IF: 4.853), SCI, SCIE and SCOPUS**.
53. Dewangan, H. C. and **Panda, S. K**., **(2022)**, Nonlinear thermoelastic numerical frequency analysis and experimental verification of cutout abided laminated shallow shell structure, **J. of Pressure Vessel Technology**, [**https://doi.org/10.1115/1.4054843**](https://doi.org/10.1115/1.4054843), (**IF:1.051**), **SCI, SCIE and SCOPUS.**
54. Kumar, K, E., Mishra, P. K., Dewangan, H. C., **Panda, S. K,** and Dwivedi, M**.** **(2022)**, Damaged composite structural strength enhancement under elevated thermal environment using shape memory alloy fiber, **Acta Mechanica,** **<https://doi.org/10.1007/s00707-022-03272-w>, (IF: 2.698)**, **SCI, SCIE and SCOPUS.**
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***Book Chapter/Book/Edited Book***

1. V R Kar, S K Panda, K Jayakrishna, P Tripathy, M Manikandan and A Karakoti, Deformation characteristics of functionally graded composite panels using finite element approximation Published in Elsevier “Modelling of Damage Processes of Bio Composites, Fibre Reinforced Composites and Hybrid Composites” <https://doi.org/10.1016/B978-0-08-102289-4.00012-6> Woodhead Publishing Series in Composites Science and Engineering
2. Dewangan, H.C., Panda, S. K., Sharma, N. and Hirwani, C. K., Investigation of Blast Loading Response of the Composite Sandwich Panels, Sandwich Composites CRC Press, Taylor and Francis Group, <https://doi.org/10.1201/9781003143031-8> .
3. Hirwani, C. K., Pal, R., Choudhury, M., Panda, S. K., and Sharma, N., Dynamic Behavior of Laminated Composites with Internal Delamination, Advanced Composite Materials and Structures, CRC Press, Taylor and Francis Group, [https:// DOI: 10.1201/9781003158813-16](https://doi.org/10.1201/9781003143031-8) .

**Edited Book**

1. **Advanced Composite Materials and Structures**, Subject: Engineering & Technology, Physical Sciences, Edited By: Mohamed Thariq Hameed Sultan, Vishesh Ranjan Kar, **Subrata Kumar Panda**, Kandaswamy Jayakrishna, **Publisher: CRC Press**, eBook ISBN9781003158813 and DOI: <https://doi.org/10.1201/9781003158813>

***Patents***

1. Automated GupChup Machine: Prakash Kumar Sarangi, Subrata Kumar Panda and Siba Shankar Mahapatra, **GRANTED** 29th October 2021: IN Patent **380941**
2. Fatigue and Creep Testing Machine for Nonmetallic/Composite Materials: Souvik Biswas, Subrata Kumar Panda and Chetan Kumar Hirwani (201831038189) **GRANTED** 4th August 2022: IN Patent **403054**.
3. **Extruder for Rapid Prototyping Machines:** Anshuman Guru**,** Hukum Chand Dewangan **and Subrata Kumar Panda** (**202331003147**), 16th Jan 2023

***Design***

1. **Extruder for 3D Printer,** Anshuman Guru**,** Hukum Chand Dewangan **and Subrata Kumar Panda** (**377725-001**), 20th Jan 2023

***Short Term Course/Workshop Attended***

1. One month course on CAD/CAM Technology at CTTC, Bhubaneswar May 17th June 16th 1999.
2. Work Shop on Filament Winding Technology at IIT Kharagpur 12th and 13thApr. 2007.
3. Work Shop on MEMS/NEMS under IUCEE at RVCE, Bangalore 12-16th July 2010.

***Courses handled***

1. Mechanics of Materials-I & II
2. Machine Dynamics-I
3. Manufacturing Process-I
4. Engineering Mechanics
5. Advanced Composite Materials
6. Finite Element Method

***Conference Presentation/Invited Lecture/Guest Lecture/Short Term Course***

1. Short Term Course on, “Modeling and Simulation of Gas Fired Furnaces in Steel Industry” SAIL Bokaro, 15-30th Nov. 2021.
2. Delivered Lecture on, “Mechanics Based Material Modelling and Analysis of Structure and Structural Components-An Overview”, ATAL Sponsored Online Faculty Development Program (FDP) on “Advances in Novel Composite Materials: Fabrication, Analysis and Optimization” 8th September 2021.
3. Delivered Lecture on, “Material Mechanics Simulation and Modelling-An Overview”, TEQIP-II SPONSORED STTP at NIT Karnataka “Advances in Computational Mechanics for Engineering Applications (ACMEA-2021)” 1st-5th February 2021.
4. Delivered Lecture on, “Mechanics Based Multiscale Modelling and Analysis of Uniform/Graded/Hybrid Structure-An Overview”, AICTE SPONSORED STTP at C. V. Raman Global University on “Processing, Characterisation and Modelling of Smart Material and System” 18th-23rd January 2021.
5. Delivered Lecture on, “Mechanics Based Materials Modelling and Importance in Mechanical Engineering Design”, TEQIP-III SPONSORED STTP at Government Engineering College Keonjhar October 2020.
6. Delivered Lecture on, “Numerical/Simulation Modelling of Graded Structure: Material Model Perspective”, TEQIP-III SPONSORED FDP at VSSUT Burla on “Product Manufacturing and Analysis: Inculcation of Newer Methodologies (PMAINM-2020)” 9th-13th September 2020.
7. Delivered Lecture on, “Fundamental Approach for Mechanics Based Modelling Simulation and Experimentation (Nano to Macro): An Overview”, TEQIP-III SPONSORED FDP at Government Engineering College Kalahandi August 2020.
8. Delivered Lecture on, “Multiscale Materials Modelling: Fundamental and Applications”, FDP at Malla Reddy College of Engineering and Technology on Emerging Technologies in Structural and Fluid Modelling and Analysis July-August 2020.
9. Deliver a lecture on, “Importance of Modelling and Analysis in Mechanical Engineering”, TEQIP-III, BPUT sponsored FDP on “Advances in Mechanical Engineering” AME-2020 11th-15th February (14.02.2020).
10. Deliver a lecture on, “Modelling-Analysis of Fibre-reinforced Composite and Optimisation of Structural Responses”, Advanced Techniques for Characterization and Optimization of Mechanical System (ATCOMS-2019) VSSUT Burla, April 2nd-6th 2019.
11. Deliver a lecture on, “Introduction to Smart /Functional Materials and their Applications”, Recent Innovations and Developments in Futuristic Materials NIT Jamshedpur, December 17th-21st 2018.
12. Deliver a lecture on, “Nonlinear Structural Modeling and Analysis”, GIAN Course NIT Rourkela, October 1st-5th 2018.
13. Deliver lecture on, “Modeling and Simulation of CNT/Delamination/Functional Material with Experimental Step”, VSSUT Burla 23rd-28th April 2018
14. Deliver lecture on, “Modeling and Analysis of CNT Reinforced Composite Structure (Nano/Micro to Macro Scale)”, Institute of Engineers 20th April 2018, Rourkela Local Centre.
15. Delivered a lecture on, “Introduction to FEM and implementation in Composite Analysis”, VSSUT Burla 19th-24th February 2018
16. Short Term Course on Applied Mathematics and Mechanics of Composite and Functional Materials: 15st-17th December 2016 *NIT Rourkela*.
17. Delivered a lecture on, “Vibro-Acoustic Behaviour Laminated Structure”, EAACM-2016, *NIT Rourkela Bhubaneswar* 6th October 2016.
18. Short Term Course on COMPOSITE MATERIAL PROCESSING ANALYSIS AND OPTIMISATION: 21st-24th June 2016 *NIT Rourkela*.
19. Co-Convenor in National Symposium on Rotor Dynamics (NSRD-2016) 7th-9th January 2016 *NIT Rourkela*.
20. Delivered a lecture on, “Free Vibration Behaviour of Carbon Nanotube Reinforced Composite Plate under Thermal Environment”, *KIIT University Bhubaneswar* 3rd October 2015
21. Delivered a lecture on “How to Choose Research Problem” Department of Mechanical Engineering, *NIT Rourkela,* Odisha, April 2015.
22. Mechanics Based Design of Materials and Structures *MITS Raygada* 23rd March 2013 of Basant Utsav.
23. Introduction to Vibration in VABRAM *NIT Rourkela* 21-22 October 2013
24. Geometric Nonlinear Vibration Analysis of Heated Laminated Cylindrical Panel, ACUN6 –*Composites and Nanocomposites in Civil, Offshore and Mining Infrastructure* *Melbourne* 14 – 16 November 2012
25. Vibration of thermally post-buckled composite panels with and without SMA fibres Workshop on Modelling and Analysis of Dynamic System, *NIT Rourkela* 6th December 2011

***Administrative Positions***

1. Faculty In charge Library of School of Mechanical Engineering at KIIT University Bhubaneswar**.**
2. Faculty Advisor of 2011-2015 batch, NIT Rourkela
3. Member of procurement- TEQIP-II
4. Member of Institute Seminar Group 2012-2014
5. Nodal officer Procurement, COE, OTEAR
6. Member of CSAB Reporting Centre 2013, 2014, 2015, 2016
7. Departmental Committee member of Curriculum Development
8. Departmental Co-ordinator of Summer Internship Programme 2013-2014
9. Departmental Research Committee Member
10. PADA, Transport, NIT Rourkela (15th April 2015 to 30 June 2017)
11. Member of written and trade test for Stipendiary technicians (2012-2013)
12. Member of Non-teaching recruitment written and trade test (2012-2013 and 2013-2014)
13. Member NBA Accreditation of Machine Design and Analysis Group
14. Faculty advisor 2011-2016 (Dual degree)
15. Faculty advisor 2016-2021 (Dual degree)
16. Faculty advisor 2016-2018 (M. Tech)
17. Faculty Advisor SAE- Efficycle (2014-2015 and 2015-2016)
18. Faculty Advisor of Bhoomi (save Earth) Club
19. Warden SD Hall 1st July 2018 to till Date
20. Arrangement for Degree Awardees in Convocation 2019 to 2021
21. Professor In-charge Examination from July 2023 to till date

***Reviewed article (Journals/Books)***

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Name of the Journal/Book** | **Publisher** | **Role** |
| 1. | Proceedings of the IMechE, Part C, Journal of Mechanical Engineering Science | Sage Publication | Reviewer |
| 2. | Proceedings of the IMechE, Part G, Journal of Aerospace Engineering | Sage Publication | Reviewer |
| 3. | Meccanica | Springer | Reviewer |
| 4. | Journal of Mechanical Science and Technology | Springer | Reviewer |
| 5. | Aerospace Science and Technology | Elsevier | Reviewer |
| 6. | Mechanics of Advanced Materials and Structures | Taylor Francis | Reviewer |
| 7. | International Journal of Latin America | Springer | Reviewer |
| 8 | International Journal of Solids and Structures | Elsevier | Reviewer |
| 9. | Engineering Mechanics Book by Oxford University Press 2011 | Oxford | Reviewer |
| 10. | European Journal of Mechanics Solids/A | Elsevier | Reviewer |
| 11. | Structural Engineering Mechanics and Steel and Composite Structures | Techno press | Reviewer |
| 12. | International Journal of Mechanical Sciences | Elsevier | Reviewer |

***M. Tech/B. Tech Project Completed***

|  |  |  |
| --- | --- | --- |
| **Name of the Student** | **Title of the Thesis** | **Status** |
| B. Tech project (2011) | Fabrication and Experimental Analysis of Bamboo Based FGM Plates. | Completed |
| B. Tech project (2013) | Static and Dynamic Analysis of FGM plates | Completed |
| B. Tech project (2013) | Buckling and Vibration Analysis of Laminated Composite plates | Completed |
| B. Tech project (2013) | Static and Buckling Analysis of Sandwich Plate with Orthotropic Core | Completed |
| B. Tech project (2014) | An Indigenous Automated Gup-Chup Machine | Completed |
| B. Tech project (2014) | Buckling Analysis of Laminated Composite Plates | Completed |
| B. Tech project (2014) | Free Vibration Analysis of Curved Panels | Completed |
| B. Tech project (2014) | Buckling Analysis of SWCNT Reinforced Composite Plate | Completed |
| B. Tech project (2015) | Development of an Experimental Set-up for producing Metal and Ceramic Functionally Graded Materials | Completed |
| B. Tech project (2015) | Uncertain Vibration Analysis of Laminated Structure-A Fuzzy Finite Element Approach | Completed |
| B. Tech project (2015) | Design of Piezoresistive MEMS Accelerometer with Optimized Device Dimensions | Completed |
| B. Tech project (2015) | FEM Modeling of Single Walled Carbon Nanotube | Completed |
| B. Tech Dual Degree  (2015) | Design and Development of Solar Panel Cleaning System | Completed |
| B. Tech project (2016) | Numerical Analysis of Energy Harvesting using PZT | Completed |
| B. Tech project (2016) | Vibration Analysis of PZT Bonded Laminated Structure Using Experimental and Numerical Approach | Completed |
| B. Tech Project (2017) (3) | Design and Fabrication of Bending Fatigue Testing Experimental Set up | Completed |
| B. Tech Project (2018) | Design and Fabrication of a flat plate bending fatigue and creep testing machine for composites | Completed |
| B. Tech Project (2018) | Aeroelastic Analysis of Composite Plate using ANSYS Workbench | Completed |
| B. Tech Project (2018) | Numerical Analysis of structural responses of layered composite structure embedded with magnetostrictive material | Completed |
| B. Tech Project (2018) | Buckling Analysis of Functionally Graded Material Sandwich plate Under Parametric Excitation | Completed |
| B. Tech Dual (2018) | Static deflection analysis and frequency response of laminated composite material embedded with magneto-strictive material | Completed |
| B. Tech (2019) | Analysis and fabrication of hot press | Completed |
| B. Tech (2019) | Analysis and fabrication of hot press | Completed |
| B. Tech (2019) | Analysis and fabrication of hot press | Completed |
| B. Tech (2019) | Design and Fabrication of Thermal Chamber for Buckling Analysis of Composites | Completed |
| B. Tech (2019) | Design and Fabrication of Thermal Chamber for Buckling Analysis of Composites | Completed |
| B. Tech (2020) | Modal and Harmonic Response Analysis of Thin Circular Cylindrical panel | Completed |
| B. Tech (2020) | Frequency Analysis of Composite Laminates with Delamination and Cut-out | Completed |
| B. Tech (2020) | Creep Behaviour of Nickel-Titanium Shape-Memory Alloys: FEM Approach | Completed |
| B. Tech (2020) | Free and forced vibration analysys of laminated composite plate | Completed |
| B. Tech (2021) | Design and Development of Energy Harvester | Completed |
| B. Tech (2021) | Fracture modelling of polymer/metal matrix composite including scale effect | Completed |
| B. Tech (2022) | Multiphysics Behaviour of PLA-Based Stent in Normal and Bifurcating Artery | Completed |
| B. Tech (2022) | Static and Transient Analysis of Cracked Multidirectional Functionally Graded Plate | Completed |
| B. Tech (2022) | Design and Development of Modified Extruder for Rapid Prototyping Machine | Completed |
| B. Tech (2022) | Vibration and Buckling Analysis of Bidirectional Functionally Graded Plates Containing Cracks | Completed |
| B. Tech (2022) | Development of Data-Driven Model For Crack Detection | Completed |
| B. Tech (2022) | Development of Vision-Based Model For Crack Detection | Completed |
| B. Tech (2022) | Mechanical and Adsorption Characteristics of CNT-Reinforced PIM-1 Composite: A Molecular Dynamic Approach | Completed |
| B. Tech (2022) | DESIGN AND ANALYSIS OF AN AIRFOIL FOR ATTAINING HIGHER LIFT IN A GIVEN REYNOLDS NUMBER RANGE | Completed |
| B. Tech (2022) | Development of Data-Driven Model For Crack Detection" | Completed |
| B. Tech (2022) | Mechanical and Adsorption Characteristics of CNT-Reinforced PIM-1 Composite: A Molecular Dynamic Approach | Completed |
| B. Tech (2022) | Flexural Analysis of Fiber Metal Laminate (FML) Structures with Geometric Nonlinearity" | Completed |
| B. Tech (2022) | Modelling and analysis of smart material bonded fibre metal laminates | Completed |
| B. Tech (2022) | Machine Learning Technique for Human Heart Health Prediction Using Gait Relevant Parameters | Completed |
| B. Tech (2022) | Machine Learning Technique for Human Heart Health Prediction Using Gait Relevant Parameters | Completed |
| B. Tech (2022) | Modelling and analysis of smart material bonded fibre metal laminates | Completed |
| B. Tech (2022) | Machine Learning Technique for Human Heart Health Prediction Using Gait Relevant Parameters | Completed |
|  | **PG Dissertation** |  |
|  |  |
| Pradeep K Mishra (M. Tech) (2013) | Nonlinear Static Analysis of Laminated Plates bonded with Magnetostrictive (Terfelon-D) material | Completed |
| Girish K Sahu (M. Tech) (2013) | Free Vibration and Static analysis of Skew Composite Plates with and without cut-outs | Completed |
| Rohit Singh (M. Tech) (2014) | Thermal Buckling Analysis of Laminated Composite Shell Panel Embedded with Shape Memory Alloy Fibre under TD and TID | Completed |
| Md. Abdul Hussain (M. Tech) (2014) | Buckling analysis of functionally graded carbon nanotubes reinforced composite (FG-CNTRC) plate. | Completed |
| Ravi Pratap Singh (M. Tech) (2015) | Vibration Analysis of Laminated Composite with Fuzzy Based Uncertain Material Properties | Completed |
| Ajay Paswan (M. Tech)  (2015) | Vibration behaviour of FGCNT Composites with and without temperature dependent material properties | Completed |
| Deeprodyuti Sen (M. Tech) (2015) | Experimental and Numerical Investigation of Mechanical Properties of In-Service Materials using Miniaturized Specimens based on Multi-scale Mechanics Approach | Completed |
| Suraj Bhankar (M. Tech) (2015) | Experimental and Numerical Study of Acoustic Behaviour of Laminated Structure | Completed |
| Umesh Tompe (M. Tech) (2016) | Vibration Analysis of nano-plate using Nonlocal Elasticity | Completed |
| Vikram Ukirde (M. Tech) (2016) | Experimental and Numerical Analysis of PZT bonded Laminated Composite Plate | Completed |
| Srikant (M. Tech) (2016) | Experimental and Numerical Analysis of Free Vibration and Dynamic Behaviour of Laminated Composite Shallow Shell under Hygrothermal Condition | Completed |
| Sarda Devi Suman (2017) | Effect of nano magnetostrictive particle on vibration response of polymer composite | Completed |
| Himansu Mittal (2017) | Simulation study of luffa fiber reinforced composite under various geometrical parameters | Completed |
| Abhishek Chaturvedi (2017) | Fabrication and Characterization of Luffa Fiber Reinforced Polymer Composite and Development of Experimental Set-up for Thermal Free Vibration | Completed |
| Arijit Das (2018) | Optimal Free Vibration Responses for Composite Laminated Plates using FEM and Soft Computing Techniques | Completed |
| S. Gajavie (2018) | Dynamic Stability Behavior of Functionally Graded Sandwich Plates under Parametric Excitation | Completed |
| Sai Sarthak Behera (2018) | Acoustic Behaviour of Natural Fiber Reinforced Composites | Completed |
| Nallala Hari Babu (2019) | Prediction of Damage (Location and Size) and Propagation Using Simulation and Numerical Approach | Completed |
| Lalepalli Anil Kumar (2019) | Mass Optimization of Composite Structure using Higher-Order Hybrid (FEM and PSO) Technique | Completed |
| Kartikeswar Dwibedy (2019) | Damage Analysis of multi-layered composite structures-A Simulation Study | Completed |
| Mani Chandra Kunche (2019) | Simulation Study of Stress and Deformation Responses of Multi-Layered Cylindrical Composite Shell with Defect | Completed |
| Bibhu prasad Mahapatra (2020) | Simulation Study of Stress and Deformation Responses of Multi-Layered Cylindrical Composite Shell with Defect | Completed |
| Prateek Gupta (2021) | Design and Development of Hybrid Energy Harvester | Completed |
| Subham Tribhuan Bhau Saheb (2022) | Modelling and Analysis of Femur Bone | Completed |
| Shridhar Bondala (2022) | Uncertain Structural Responses of CNT Reinforced Polymeric Composite using FFEM | Completed |
| Pawan Singh (2023) | Machine Learning Techniques for Human Heart Health Prediction using Gait-Relevant Parameters" - | Completed |
| Prabhat Singh Kourav (2023) | Assortment of GAIT Data and Curation for Machine Learning Model Implementation to Prediction of Human Heart Health | Completed |
| Vivekanand (2023) | Data-Driven Deep Learning Model-Based Monitoring of Structural Health for High Performance Engineering | Completed |

***PhD/M. Tech/M. Tech (R) On-going***

|  |  |  |
| --- | --- | --- |
| **Name of the Student** | **Title of the Thesis** | **Remark** |
| Vikash Kumar (**Ph.D**) | Multiscale Material Model Implementation for Optimal Failure Parameter Prediction of Damage Composite Component under High-strain and High Temperature loading | Progress Completed March 2022 |
| Erukala Kalyan Kumar (**Ph.D**) | Training of Self-Healing Characteristics of Smart Material Bonded with Polymeric Structural Component: Numerical Modelling and Experimental Verification | Registration Completed August 2021 |
| Ashish Kumar Meher (**Ph.D**) | Mechanobiological Analysis of Human Brain Tissue | Enrolled for PhD in January 2023 Course work continuing |
| Libin Chakkata Thomas (Ex. **Ph.D**) | Metal Laminated Structural Analysis for Industrial Application | Registration Seminar Completed 2023 |

***PhD/M. Tech(R) Completed***

|  |  |  |
| --- | --- | --- |
| Pankaj V. Katariya **(M.Tech.(R))** | Vibration and Buckling behaviour of Laminated Composite Plates Under Thermal and Mechanical Loading | **Completed (2014)** |
| Sushree S. Sahoo **(M.Tech. (R))** | Experimental and Numerical Investigation of Static and Dynamic Analysis of delaminated composite plate | **Completed**  **(2016)** |
| Vishesh R. Kar (**Ph.D**., NIT Rourkela) | Nonlinear Thermoelastic Vibration, Stability and Flexural Behaviour of Functionally Graded Curved Panels with TD and TID properties | **Completed**  **(2015) Sole Supervision** |
| Trupti R. Mohapatra (**Ph.D**., Registered at KIIT University) | Nonlinear Vibration and Flexural Analysis of Doubly Curved Composite Shell Panel Under Hygro-thermo-mechanical loading | **Completed**  **(2016) Sole Supervision** |
| Vijay K. Singh (Ph.D., NIT Rourkela) | Nonlinear Dynamic Analysis of Laminated Composite Doubly Curved Shallow Shell Panel Bonded with and without Piezoelectric Layer-Numerical and Experimental Approach | **Completed**  **(2016) Sole Supervision** |
| Nitin Kumar Sharma **Ph.D**., Registered at KIIT Bhubaneswar, Deemed to University) | Vibroacoustic Behaviour of Laminated Composite and Sandwich Structure Under Hygrothermal Environment | **Completed**  **(2018) Supervisor from KIIT (Dr. T. R. Mahapatra)** |
| Kulmani Mehar (**Ph.D**., NIT Rourkela) | Nonlinear Thermoelastic Analysis CNT-reinforced Sandwich Structure Embedded with SMA fibre-Theoretical and Experimental verification | **Completed**  **(2019) Sole Supervision** |
| Chetan K. Hirwani (**Ph.D**., NIT Rourkela) | Experimental and Theoretical Nonlinear Transient Behaviour of Delaminated Composite Shell Panel under Hygro-Thermo-Mechanical Loading | **Completed**  **(2019) (Co-Supervision Pro. S. S. Mahapatra, ME)** |
| Shreeshan Jena (BMBT) (**Ph.D**., NIT Rourkela) | Design and Improvement of Prosthetic devices for lower limb application | **Completed (2020) Main- Supervisor: Prof. A. Thirugnanam, BM)** |
| Pankaj V. Katariya **(Ph.D.)** | Nonlinear Analysis of Skew Sandwich Laminated Structures Embedded with SMA Fibre under Hygro-Thermo-Mechanical Loading | **Completed (2020) Sole Supervision** |
| Prurhwiraj Sahoo (**Ph.D)** Registered at KIIT Bhubaneswar, Deemed to University) | Numerical and Experimental Analysis of Hybrid Laminated Composite Structure under Thermo-Mechanical Loading | **Completed (2021) August** Supervisor **from KIIT (Dr. N. Sharma)** |
| Hukum Dewangan (**Ph.D**) | Theoretical and Experimental Analysis of Large Deformation Induced Frequency, Static and Transient Responses of Layered Structure with Cut-out under Thermo-Mechanical Loading | **Completed (2022)**, **Sole Supervision** |
| Brundaban Sahoo (**Ph.D)** Enrolled at IIIT Bhubaneswar | Vibration and Postbuckling analysis of Functionally Graded Sandwich Structure | **Completed (2022) Main- Supervisor: Prof. Bamadev Sahoo, ME)** |
| Prashik Ramteke (**Ph.D)** | Nonlinear Numerical Modelling and Analysis of Porous Functionally Graded Curved Structures under Thermomechanical Loading | **Completed (January 2023)**, **Sole Supervision** |
| Rajesh Satankar (**Ph.D**) | Multiphysics-Multiscale Model Implementation for Thermoacoustic Response Prediction of Plant Fibre-Reinforced Hybrid Polymer Composite- An Experimental Verification | **Completed**  **(January 2023) (Co-Supervision Pro. S. S. Mahapatra, ME)** |

***Sponsor Project***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No** | **Title of the Project** | **Cost in Lakh** | **Agency** | **Status** |
| 1 | Fracture and Nonlinear Behavior Analysis of Laminated composite and Functionally Graded Curved Panels under Elevated Thermal Field | 13.35 | AICTE | **Completed (PI)** |
| 2 | Experimental and Numerical Investigation of Vibration Control of Laminated Composite Panel Bonded with Piezoelectric Materials | 24.20 | DST | **Completed (PI)** |
| 3 | Center of Excellence on Orthopedic Tissue Engineering and Rehabilitation (Institutional Level) | 500 | TEQIP-II | **Completed (PI)** |
| 4 | Experimental and numerical investigation of Dynamic behavior of De-laminated Carbon- Epoxy Composite Rocket motor casings (CRMCs) under Hygro-Thermal-Mechanical loading – Role of size of Delamination/Defects | 61 | DRDO | **Completed (PI)** |
| 5 | Electromagnetic welding (EMW) coil design & characterization from mechanical and metallurgical aspects for tubular jobs of ODS alloy with other materials. | 27.00 | BRNS | **Co-PI** **Completed** |
| 6 | Tough Biomimetic Composite Inspired by Abalone Nacre Architecture for Lightweight Multilayered Armour Applications | 77.51 | IMPRINT | **Co-PI** (Work in progress) |
| 7 | Optimal prediction and design of Adhesion/Delamination induced damages in Aerostructures | 18.30 | TARE(SERB) | **Mentor (PI at NIT Rourkela)** |

***Personal Profile***

Name: Dr. Subrata Kumar Panda

Date of Birth: 4th May 1979

Category: General

Sex: Male

Marital Status: Married

Nationality: Indian

Mailing Address: B-4, NIT Campus, NIT Rourkela, Rourkela: 769008,

Email: [call2subrat@gmail.com](mailto:call2subrat@gmail.com), [pandaskmosclass@gmail.com](mailto:pandaskmosclass@gmail.com)

[pandask@nitrkl.ac.in](mailto:pandask@nitrkl.ac.in)

Permanent Address: At/Po: Rahasohi, Dist: Jajpur, Pin-755007

Orissa

**Any other Information** Different articles are in preparation mode. Two projects are already submitted to the sponsoring agencies.

***Declaration:***

I do here by declare that all the above-mentioned statements are true and fact to the best of my knowledge & belief. I look forward chance to prove my competency and worth.

|  |  |
| --- | --- |
| Date: 25th January 24  Place: Rourkela | C:\Users\nit\Pictures\Scans\Panda Sir Sign.png  (Subrata Kumar Panda) |