Curriculum Vitae

Correspondence

Dr. KARAN KUMAR PRADHAN
C/O – AJIT KUMAR PRADHAN
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Personal Profile

FATHER'S NAME	:	AJIT KUMAR PRADHAN
DATE OF BIRTH	:	10th July 1989
NATIONALITY	:	Indian
GENDER	:	Male
MARITAL STATUS	:	Single
LANGUAGES KNOWN	:	English, Hindi and Odia

Overview

In 2011, I have qualified the **Graduate Aptitude Test in Engineering (GATE), 2011** conducted jointly by Ministry of Human Resources Development (MHRD), Government of India. Afterwards, I have joined the Ph.D. program in National Institute of Technology Rourkela, Odisha, India under the guidance of Prof. S. Chakraverty (Ph.D. from IIT Roorkee; Post-Doctoral from Institute of Sound and Vibration Research, University of Southampton, U.K. and Concordia University, Canada). My research interest includes the numerical modeling of static and dynamic problems concerned with isotropic as well as functionally graded structural members. On August 12, 2016, I was offered **SERB National Post-Doctoral Fellowship** at **CSIR-CBRI, Roorkee** up to January 16, 2018. Subsequently, I have served as **Assistant Professor (On Contract)** on January 19, 2018 at Parala Maharaja Engineering College, Berhampur with the financial grant of **NPIU (TEQIP-III)**.

Post Ph. D. experience

19.01.2018 to **30.09.2021**	**Assistant Professor (On Contract),** Department of Mathematics, Parala Maharaja Engineering College, Berhampur 761003 sponsored by **National Project Implementation Unit (TEQIP-III)**
12.08.2016 to **16.01.2018**	**SERB National Postdoctoral Fellow**, AIMS Division, CSIR-Central Building Research Institute, Roorkee
Dissertation title	***Numerical solutions of static and dynamic problems of functionally graded structural members***

Educational background

Year	Degree	School/Institute	Board/University	Specialization	%age/CGPA
2016	Ph. D.	National Institute of Technology Rourkela	National Institute of Technology Rourkela	Mathematics	8.40 CGPA
2011	M. Sc.	National Institute of Technology Rourkela	National Institute of Technology Rourkela	Mathematics	7.37 CGPA
2009	B. Sc.	Govt. Autonomous College, Rourkela	Sambalpur University, Odisha	Mathematics	69.00 %
2006	Intermediate (10+2)	Saraswati Vidya Mandir, Damanjodi	Council of Higher Secondary Education, Orissa	Science	72.67 %
2004	Matriculation (10^{th})	Kandhal High School, Kandhal, Deogarh	Board of Secondary Education, Orissa		78.53 %

Honours and Awards

2018 **Assistant Professor (On Contract)** via **NPIU (TEQIP-III)**

2016 **SERB** National Postdoctoral Fellowship **(N-PDF)**

2011 Graduate Aptitude Test in Engineering **(GATE)** – **MA**

Course(s) taught

*In specific, the courses taught for UG (B. Tech.) program are designed and regulated by **Biju Patnaik University of Technology, Odisha**.*

Mathematics-I Ordinary differential equations, Partial Differentiation

Mathematics-II Linear Algebra, Vector Differential and Integral Calculus, Fourier series and transforms

Mathematics-III Complex Analysis, Numerical Analysis, Probability & Statistics

Skills

MATLAB (programming), **LATEX** (word processing)

Publications

Journals (reverse chronological order)

1. **K.K. Pradhan,** S. Chakraverty, S. K. Panigrahi. ***Implementation of numerical approximations in studying vibration of functionally graded beams***, **International Journal of Dynamics and Control** (2017) 6 (3), 1023-1046. (Springer Berlin Heidelberg)

2. S. Chakraverty, **K.K. Pradhan**. ***Flexural vibration of functionally graded thin skew plates resting on elastic foundations***, **International Journal of Dynamics and Control** (2017) 6 (1), 97-121. (Springer Berlin Heidelberg)

3. **K.K. Pradhan**, S. Chakraverty. ***Natural frequencies of shear deformed functionally graded beams using inverse trigonometric functions***, **Journal of the Brazilian Society of Mechanical Sciences and Engineering** (2017) 39 (9) 3295-3313. (Springer Berlin Heidelberg, Impact Factor – 2.220).

4. **K.K. Pradhan**, S. Chakraverty. ***Free vibration of FG Levy plates resting on elastic foundations***, **Engineering and Computational Mechanics** 169 (2015) 3-28. (Proceedings of the Institution of Civil Engineers)

5. **K.K. Pradhan**, S. Chakraverty. ***Generalized power-law exponent based shear deformation theory for free vibration of functionally graded beams***, **Applied Mathematics and Computation** 268 (2015) 1240-1258. (Elsevier, Impact factor – 4.091)

6. **K.K. Pradhan**, S. Chakraverty. ***Transverse vibration of isotropic thick rectangular plates based on new inverse trigonometric shear deformation theories***, **International Journal of Mechanical Sciences** 94-95 (2015) 211-231. (Elsevier, Impact factor – 5.329)

7. **K.K. Pradhan**, S. Chakraverty. ***Free vibration of functionally graded thin elliptic plates with various edge supports***, **Structural Engineering and Mechanics** 53 (2) (2014) 337-354. (Technopress)

8. **K.K. Pradhan**, S. Chakraverty. ***Static analysis of functionally graded thin rectangular plates with various boundary supports***, **Archives of Civil and Mechanical Engineering** 15 (2014) 721-734. (Elsevier)

9. S. Chakraverty, **K.K. Pradhan**. ***Free vibration of functionally graded thin rectangular plates resting on Winkler elastic foundation with general boundary conditions using Rayleigh-Ritz method***, **International Journal of Applied Mechanics** 6(4) (2014) 145003 (37 pages). (World Scientific, Impact factor – 3.224)

10. S. Chakraverty, **K.K. Pradhan**. ***Free vibration of exponential functionally graded rectangular plates in thermal environment with general boundary conditions***, **Aerospace Science and Technology** 36 (2014) 132-156. (Elsevier, Impact factor – 5.107)

11. **K.K. Pradhan**, S. Chakraverty. ***Effects of different shear deformation theories on free vibration of functionally graded beams***, **International Journal of Mechanical Sciences** 82 (2014) 149-160. (Elsevier, Impact factor – 5.329)

12. **K.K. Pradhan**, S. Chakraverty. ***Free vibration of Euler and Timoshenko functionally graded beams by Rayleigh-Ritz method***, **Composites: Part B** 37 (2013) 175-184. (Elsevier, Impact factor – 9.078)

Book(s)

1. **K. K. Pradhan**, S. Chakraverty. ***Computational Structural Mechanics: Static and Dynamic Behaviors***. Academic Press (ELSEVIER) (2018) Oxford, UK. **ISBN: 978-0-12-815642-1.**

2. S. Chakraverty, **K. K. Pradhan**. ***Vibration of Functionally Graded Beams and Plates***. Academic Press (ELSEVIER) (2016) Oxford, UK. **ISBN: 978-0-12-804228-1.**

Book Chapter(s)

1. **K. K. Pradhan**, S. Chakraverty. ***Vibration of functionally graded piezoelectric material beams*** 'in' ***New Paradigms in Computational Modeling and Its Applications***, Academic Press (ELSEVIER) Oxford, UK (2021) 11-34.

2. **K. K. Pradhan**, S. Chakraverty. ***Transverse vibration of thick triangular plates based on a proposed shear deformation theory*** 'in' ***Recent trends in Wave Mechanics and Vibrations***, Springer Nature Singapore Pte Ltd. (2020) 1-15.

3. **K. K. Pradhan**, S. Chakraverty. ***Vibration of thick functionally graded materials skew plates based on a new shear deformation plate theory*** 'in' ***Modeling and Computation in Vibration Problems***, IOP Publishing, Bristol, UK (2021) 3-1-3-27.

4. **K. K. Pradhan**, S. Chakraverty. ***Introduction to Nanostructures*** 'in' ***Nano Scaled Structural Problems***, AIP Publishing (2021) 1-1-1-10.

5. **K. K. Pradhan**, S. Chakraverty. ***Theoretical Concepts of Nanostructural Dynamic Problems*** 'in' ***Nano Scaled Structural Problems***, AIP Publishing (2021) 7-1-7-14.

Conference and Symposium

1. **K. K. Pradhan**, S. Chakraverty (2013). Free vibration of functionally graded beams with variable thickness. ***Third International conference of Gwalior Academy of Mathematical Sciences (GAMS)*** on Mathematical, Computational & Integrative Sciences, NIT BHOPAL.

2. **K. K. Pradhan**, S. Chakraverty (2016). Natural Frequencies of Equilateral Triangular Plates under Classical Edge Supports. ***Symposium on Statistical & Computational Modelling with Applications (SymSCMA – 2016)***, Department of Statistics & Computer Science, University of Kelaniya, Sri Lanka. p 30-34.

Referees

1. Prof. S. Chakraverty
   Professor, Department of Mathematics, National Institute of Technology Rourkela, Rourkela 769 008, Odisha (IN)
   Email(s): chakravertys@nitrkl.ac.in, sne_chak@yahoo.com
   Contact: +91-661-2462713 (O), +91-9437135400 (M)

2. Dr. P. C. Biswal
   Associate Professor, Department of Basic Science, Parala Maharaja Engineering College, Berhampur, Sitalapalli – 761003, Ganjam, Odisha (IN)
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I do hereby declare that all statements provided herein are true to the best of my knowledge and belief.

PLACE:

DATE: (KARAN KUMAR PRADHAN)