Aurojyoti Prusty

Curriculum Vitae

Research Scholar, Dept. of Civil Engineering
IIT Hyderabad, Kandi(V), Sangareddy(M)
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I am currently a Ph.D. student in the Department of Civil Engineering, Indian Institute of Technology Hyderabad. My research interests are Phase-field modeling for fracture in small as well as in large strains, Mechanics of Laminated Composites, Nonlocal theory, Strain-gradient theory, Meshless methods.

Career Objective

- To learn and work in a challenging academic environment demanding all my skills, while pursuing my teaching and research ability, and to continuously engage myself in different fields of structural engineering and computational mechanics.

Education

2018– **Indian Institute of Technology Hyderabad**, *Ph.D.*, Civil Engineering, *CGPA: 7.94/10.*

2010–2015 **National Institute of Technology, Rourkela**, *M.Tech*, Civil Engineering, Structural Engineering, *CGPA: 8.95/10.*

2010–2015 **National Institute of Technology, Rourkela**, *B.Tech*, Civil Engineering, *CGPA: 8.02.*

2007–2009 **N.C. Junior College, Jajpur, Odisha**, *Higher Secondary Education, CHSE Board, Odisha, Marks secured: 80.80%.*

Industry Experience

- **Post Graduate Engineer Trainee**, *(PGET)*, Larsen and Toubro Limited, July 2015- December 2016. Planning and Execution of construction in 33/11 Kv Substation.

Projects

- **M.Tech Project**, *Probabilistic Analysis of Reinforced Concrete frame*, under the guidance of Dr. Robin Davis P., NIT, Rourkela.

Publications

1 , P. Aurojyoti, P. Raghu, A. Rajagopal, and J.N. Reddy.
An n-sided polygonal finite element for nonlocal nonlinear analysis of plates and laminates, International Journal for Numerical Methods in Engineering, Vol-121, Issue-9, page(1071-1107)

2 , P. Aurojyoti, A. Rajagopal and K.S.S. Reddy.
Modeling Fracture in polymeric material using phase-field method based on critical stretch criterion., International Journal of Solids and Structures, 2023

3 , P. Aurojyoti, A. Rajagopal.
Modeling Fracture in brittle material by higher order phase-field method using C^1 non-sibsonian interpolants., Engineering Computations, 2023, (Under review)

Conference Presentations

1 , P. Aurojyoti, A. Rajagopal.
Second-order phase-field modeling of fracture in Hyperelastic material using Natural Neighbor Galerkin Method.,8th International Congress on Computational Mechanics and Simulation (ICCMS-2021), IIT Indore

2 , P. Aurojyoti, A. Rajagopal.
Modeling fracture in brittle materials by higher-order phase-field method using C^1-Non-sibsonian interpolants. ,4th Structural Integrity Conference and Exhibition (SICE-2022), IIT Hyderabad

3 , P. Aurojyoti, A. Rajagopal.
Crack propagation in Hyperelastic material using phase field method ,7th International Conference on Mechanics of Composites (MECHCOMP7), Porto (Portugal), 2021.

4 , P. Aurojyoti, A. Rajagopal.
Crack Growth Prediction Using Higher-Order Phase Field Method in Hyperelastic Material, International Conference on Computational Methods in Science and Engineering (CMSE-2022), BITS, Hyderabad.

5 , P. Aurojyoti, A. Rajagopal.
Polygonal Finite Element Method for Analysis of Plates and Laminates Using Non-locality., 7th International Congress on Computational Mechanics and Simulation (ICCMS-2019), IIT Mandi, 11-13 December 2019

Courses

Ph.D..
Finite Element Analysis, Continuum Mechanics, Introduction to Computational Methods in Materials Science, Dynamics, and Vibration, Linear Theory of Plates

M.Tech.
Advance Mechanics of Solids, Applied Elasticity, and Plasticity, Advanced RCC Design, Advanced Structural Analysis, Analysis and Design of Plates and Shells, Computer

Internship and Participations

- **Symposium**, *NMAMLD*, *Nonlocal Mechanics Approaches for Modeling Localized Deformations*, IIT Hyderabad, 7-8 June, 2022.

- **Workshop**, *SEISMIC*, *Computational Modeling of Damage and Seismic Vulnerability Assement during Earthquakes in Building Systems*, IIT Hyderabad, 12-13 May, 2022.

- **Symposium**, *NMAMLD*, *Nonlocal Mechanics Approaches for Modeling Localized Deformations*, IIT Hyderabad, 19-21 February, 2020.

- **Workshop**, *NCAMM*, *Poster presentation: C^1 Polygonal Finite Element Method for Analysis of Plates and Laminates using Non-locality*, IISC Bangalore, 9-11 July 2019.

- **Intern**, *L&T Limited*, Construction of AIIMS buildings, Bhubaneswar, Odisha, *Building Execution and Quality Control of High Raised Building, May - July 2012*.

Software Skills and Programming Language

- Matlab, Julia, Fortran, STAAD Pro

Personal Information

- Date of Birth: 10-06-1992

- Home Address: Plot No. 35, Pawani complex, Lane-4, ITER college road, Jagmohan Nagar, Bhubaneswar, 751030

References

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