DR. AKANKSHA SRIVASTAVA

Postdoctoral Fellow
Department of Mathematics and Mechanics
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Google Scholar:
https://scholar.google.com/citations?hl=en&user=MviERI4AAAAJ
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Research Interests:

Theoretical Seismology, Elastodynamics, Solid Mechanics, Wave Propagation, Smart Materials.

Personal Details:

Nationality	**:** Indian
Sex	**:** Female
Date of Birth	**:** April 5, 1992
Marital Status	**:** Married
Languages	**:** English, Hindi, Spanish

Objective:

I am looking forward to learning and gaining experience under the prominent and progressive banner of an esteemed institution where there are challenging and exciting opportunities which call upon my abilities and skills to evolve to utmost level. An institute which nurtures and harness my epistemophilic nature and exponential thoughts in the navigation of virtuosos of mathematics.

Education:

- **Ph.D. in Applied Mathematics** (Degree awarded on January 25, 2022)
  Supervisor: Dr. Abhishek Kumar Singh (Guide), Prof. Amares Chattopadhyay (Co-Guide)
  Department of Mathematics and Computing, IIT Dhanbad, India
- **M.Sc. in Mathematics with Computer Science** (2013)
  Jamia Millia Islamia, Delhi, India
  Percentage: 74.80%
- **B.Sc. with Mathematics, Physics, and Chemistry** (2011)
  Feroze Gandhi College, Raebareli (UP), India
  Percentage: 60.79%
- **12th with Science Group** (2008)
  Jawahar Navodaya Vidyalaya, Raebareli (UP), India
  Percentage: 70.60%

- **10th with Science Group** (2006)
  Jawahar Navodaya Vidyalaya, Raebareli (UP), India
  Percentage: 71.20%

Awards/Achievements:

- Secured All India Rank (AIR) 30 in the CSIR-NET (Mathematical Sciences).
- Achieved 92.81 percentile in the Graduate Aptitude Test in Engineering (GATE - Mathematics).
- Qualified IIT JAM, demonstrating excellence in mathematical sciences.
- Successfully cleared the National Level Entrance Exam and Interview for the Ph.D. program in Mathematics at IIT Dhanbad (2016) and was awarded the Junior Research Fellowship (JRF) and Senior Research Fellowship (SRF).
- Selected through the Navodaya Vidyalaya Selection Test (JNVST) at Class 9, earning a prestigious scholarship for schooling.

Teaching/Research Experiences:

- I am currently working as a Postdoctoral Fellow at IIMAS-UNAM, Mexico, since October 14, 2024.
- I worked as a Principal Project Scientist at IIT Delhi from June 2, 2022, to October 14, 2024.
- During my PhD and Postdoc, I have taken tutorial classes for B. Tech students.
- For two years, I taught high school and intermediate students at Karma Jyoti NGO.

Presentation in Workshops:

- Science Academy's Refresher Course on "Crystal Strength Rheology and Seismicity" from May 15, 2017 to May 26, 2017 at IIT (ISM), Dhanbad.
- National Training Program on "Research Methodology" from December 18, 2017 to December 23, 2017 at IIT (ISM), Dhanbad

Presentation in Conferences/Symposia:

- Attended "13th International Conference on Vibration Problems (ICOVP-2017)" organized by Dept. of Civil Engineering, Indian Institute of Technology, Guwahati during 29 Nov – 2 Dec 2017 and presented a paper entitled "*Influence of heterogeneity, initial stress and frictionally bonded structure on the propagation of SH-wave*".

- Attended "Symposium and Workshop for Analytical Youth on Applied Mechanics (SWAYAM-2018)" organized by BITS Pilani, Goa during 4–6 July 2018 and presented a paper entitled "*SH-wave propagation in a viscoelastic sandy layer over a heterogeneous half-space*".

Research Publications:

- Chattopadhyay, A., **Srivastava, A.**, Kumar, P., & Singh, A. K. (2018). Analysis of propagation characteristics of a shear wave in a frictionally bonded fibre-reinforced stratum. *Acta Mechanica*, *229*(10), 4229-4238.

- **Srivastava, A.**, Chattopadhyay, A., Singh, P., & Singh, A. K. (2018). Wave analysis at frictional interface: A case wise study. *The European Physical Journal Plus*, *133*(3), 1-20.

- **Srivastava, A.**, Chattopadhyay, A., Singh, P., & Singh, A. K. (2018). Two-Dimensional Plane Wave Reflection and Transmission in a Layered Highly Anisotropic Media under Initial Stress. *Journal of Earthquake Engineering*, *24*(12), 1867-1885.

- **Srivastava, A.**, Chattopadhyay, A., & Singh, A. K. (2019). Impact of inhomogeneous fiber-reinforced layer with frictional interface on Rayleigh-type wave propagation. *Journal of Engineering Mathematics*, *114*(1), 159-176.

- **Srivastava, A.**, Chattopadhyay, A., & Singh, A. K. (2020). Influence of doubly loaded elastic void pores and distinct inhomogeneity in the sandwiched layered composite structure. *Waves in Random and Complex Media*, 1-18.

- **Srivastava, A.**, Chattopadhyay, A., & Singh, A. K. (2020). Analysis of reflection and transmission of three-dimensional plane wave in an intermediate fluid layer embedded between two viscoelastic anisotropic semi-infinite media. *International Journal of Mechanical Sciences*, *170*, 105007.

- Singh, P., Chattopadhyay, A., **Srivastava, A.,** & Singh, A. K. (2018). Reflection and transmission of P-waves in an intermediate layer lying between two semi-infinite media. *Pure and Applied Geophysics*, *175*(12), 4305-4319.

- **Srivastava, A.,** Singh, A. K., & Chattopadhyay, A. (2022). The reflection of a three-dimensional plane wave by the stress-free and rigid boundary of a functionally graded triclinic medium. *Acta Mechanica*, *233*(11), 4523-4534.
- **Srivastava, A.**, Singh, A. K.& Chattopadhyay, A. (2023). Reflection and transmission of three-dimensional plane wave at an imperfectly bonded interface between two distinct rotating functionally graded triclinic media, *Waves in random and complex media*, 1-28.

- **Srivastava, A.,** Matsagar, V. (2024). Interfacial Wave Propagation at Spring Contact of Functionally Graded Fibre-Reinforced and Isotropic Elastic Semi-Infinite Media**.** *International Journal of Geomechanics* (Accepted)

Extra-Curricular Activities:

- Represented as a team member in Volleyball Cluster Meets (2006–2008).
- Participated as a team member in the Basketball Cluster Meet (2006).
- Actively served in slum areas as a member of Karma Jyoti NGO (2018–2021), contributing to community welfare initiatives.

Skills:

- Computer skills: Latex; C; Windows etc.
- Rich experience in modelling and computer simulation, using MATHEMATICA, MATLAB etc.
- Problem-solving skills and always enjoy the teaching and learning process

References:

- Prof. Amares Chattopadhyay (Former),
  Department of Mathematics and Computing,
  IIT(ISM) Dhanbad, Jharkhand, 826004,
  Email Id: amares.c@gmail.com

- Dr. Abhishek Kumar Singh,
  Associate Professor,
  Department of Mathematics and Computing,
  IIT(ISM) Dhanbad, Jharkhand, 826004,
  Email Id: abhishek@iitism.ac.in

Declaration: I, Akanksha Srivastava, hereby declare that the information provided above is true and accurate to the best of my knowledge and belief.

(Akanksha Srivastava)