

Sanjeev Anand Sahu

Associate Professor
(Mathematics & Computing)

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RESEARCH INTEREST

- Electro-elastodynamics / Magneto-elastodynamics
- Solid Mechanics (Wave transference in various smart materials)
- Early Earthquake Warning System (Ionospheric Perturbation Analysis)

RESEARCH STATS

- No. of Publications: 113
- i-10 index : 40
- H-index (WoS): 19
- Orcid ID: 0000-0002-3514-6400

EDUCATION

Ph.D. (Applied Mathematics)

Indian Institute of Technology (ISM) Dhanbad, 2012
Thesis: Study of Seismic Wave Propagation in Anisotropic Media
Ph.D. Advisor: Prof. Amares Chattopadhyay

M.Sc. (Mathematics)

Govt. College of Science, Guru Ghasidas Central University Bilaspur, 2005

B.Sc. (Mathematics, Physics, Chemistry)

Govt. College of Science, Guru Ghasidas Central University Bilaspur, 2003

ACADEMIC EXPERIENCE

Associate Professor (April 2021- Present) at Department of Mathematics & Computing, IIT(ISM) Dhanabd
Assistant Professor (June 2012 - April 2021) at Department of Mathematics & Computing, IIT(ISM) Dhanabd
Lecturer (Nov. 2005- April 2008) at School of Studies in Mathematics, Pt. Ravishankar Shukla University Raipur
Lecturer (July 2005- Nov. 2005) at NIT Raipur

COURSES TAUGHT

Mathematics-I, Measure Theory, Analysis, Database Management Systems, Differential Equations, Discrete Mathematics, Programming in C, Object Oriented Programming (C++), Fortran, Integral Calculus, Advanced Numerical Methods, Classical Mechanics, Analytical Dynamics.

Additional Responsibilities (Administrative)

- Associate Dean (Rajbhasha Karyanvayan)
- Head Centre of Societal Mission, IIT(ISM) Dhanbad, India (since May 2019)
- Faculty advisor of SIAM Student chapter, IIT(ISM), Dhanbad, India (since 2015)
- Worked as Deputy Coordinator, Faculty Development Centre, IIT(ISM) Dhanbad
- Coordinator of Unnat-Bharat-Abhiyan (UBA), IIT(ISM) Dhanbad
- Served as Associate Editor of International Journal of Geophysics [Special issue, Elastic Wave Propagation and Earthquake Seismology (EWPES)]
- In-Charge, Time-Table (Applied Mathematics, IIT(ISM) Dhanbad), 2016-2022
- Member of Central Time Table Committee, IIT(ISM) Dhanbad

Awards/Fellowships

- Young Scientist in Applied Mathematics award 2017 by Venus International Foundation Chennai India
- Young Faculty in Science award 2017 by Venus International Foundation Chennai India
- Student Travel Award by Society for Industrial and Applied Mathematics (SIAM) to present paper in SIAM conference at Washington University, Seattle, USA. June 13-16, 2012.
- Junior Research Fellowship of DST(SERB), December, 2008-April, 2012.
- International Travel award under Young Scientist category to present paper in American Conference on Applied Mathematics (American-Math '12) at Harvard, Cambridge (MA), USA, 25-27 January, 2012.
- Young Scientist award for best research paper in Mathematics in an international conference of 'International Academy of Physical Sciences', December 2010.
- Contributed and presented paper was awarded the best poster presentation award in 96th annual conference of 'Indian Science Congress Association', January 2010.

Reviewer of the following SCI journals (selected)

- Applied mathematical modelling,
- Journal of solid mechanics,
- Journal of Nondestructive Evaluation
- The European Physical Journal Plus
- Journal of Acoustical Society of America
- Waves in random and complex media,
- Journal of elasticity, Journal of seismology, Physica Scripta
- Journal of Applied Mathematics and Mechanics
- Journal of Applied Science and Engineering,
- Journal of thermal stresses
- Computational thermal sciences,
- International journal of Geomechanics,
- Soil dynamics and earthquake engineering,
- Mathematical methods and applied sciences,
- Structural engineering and mechanics,
- Journal of intelligent material system and structures,
- Proceedings of the National Academy of Sciences, India Section A: Physical Sciences,
- World Scientific and Engineering Academy and Society (WSEAS).
- Mechanics of Advanced Materials and Structures

Memberships

- Society for Industrial and Applied Mathematics (SIAM), USA.
- Indian Science Congress Association, Kolkata, India.
- Von Karman Society for Advanced Study & Research in Mathematical Sciences', Jalpaiguri, India.
- International Association of Engineers, Hong Kong.
- International Academy of Physical Sciences, Allahabad, India.

Research/Other Project

- DST(SERB) Project on "*Study of Surface Wave Propagation in Elastic Solids Involving Piezoelectric Material*". 2016-2019. 15.02 Lakh. (PI).
- DST(SERB) Project on "Earthquake Early Warning detection and classification based on TEC value using Artificial Intelligence" under MATRICS scheme. 2021-2024. 06.06 Lakh. (PI).
- NBHM project on "Mathematical Modelling of Elastic Wave Propagation in Highly anisotropic Media". Funded by NBHM, Department of Atomic Energy Mumbai, India- 2017-2020. 14.38 Lakh. (Co-PI).
- MHRD Project on 'Faculty Development Centre' under the Scheme of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT). (Co-PI).

Conferences/Workshops/Camps organized

1. National Conference on Modeling Analysis and Simulation (MAS-2019) [Organizing Secretary]
2. Co-Convener of Srijan (2018-19), A cultural fest of IIT(ISM) Dhanbad, March 2019.
3. Math Quizpiad (4.0)-2018, under SIAM student chapter IIT(ISM) Dhanbad. [Faculty coordinator]
4. Free Medical Camp for Adapted villages under Unnat Bharat Abhiyan, 03.02.2018 [Coordinator]
5. 03 days Rubik-Cube work-shop at IIT(ISM) Dhanbad, 9-11 Feb. 2018 [Faculty Coordinator]
6. 01 week National Training Programme in 'Mathematica' under Faculty Development Centre, IIT(ISM) Dhanbad from 04-December-2017 to 09-December-2017. [Coordinator]
7. 21 Days Refresher Programme on 'Mathematical Sciences' for College/University/Institute Teachers under Faculty Development Centre, IIT(ISM) Dhanbad from 16 May-05 June 2017. [Coordinator]
8. First Orientation Program for College/University/Institute Teachers under Faculty Development Centre, January 2016. [Program Coordinator].
9. RASE-2016, A National Conference on Recent Advances in Science & Technology, March 28-29, 2016. [Treasurer of the conference]
10. 7th WMVC-2015, a National conference on Wave Mechanics & Vibrations, at IIT(SM) Dhanbad, during Dec. 21-23, 2015. [Convener of the conference]
11. Math Quizpiad-1.0, under SIAM student chapter IIT(ISM) Dhanbad. 2015. [Faculty coordinator]
12. Served as member of National Scientific Committee of 6th WMVC-2014, (A National conference) Silliguri(W.B.), November 2014.

Delivered talks (as invited speakers)

- Fuzzy-2013, (A National conference) Bilaspur (C.G.), IND, February 2013.
- 6th WMVC-2014, (A National conference) Silliguri (W.B.), IND, November 2014.
- Short Term Course on Integral Transformations, Distribution and Wavelet Analysis, at IIT(ISM)Dhanbad, IND, Dec. 2015.
- 21 days Refresher Programme in Mathematical Sciences, at IIT(ISM) Dhanbad, IND, May 16-June 05, 2017.
- Mathematical Modelling of Elastodynamics Problems, Held at August 06-08, 2017 at IIT(ISM) Dhanbad
- Inventions that changed Human Life in R. S. More College, Dhanbad, 27-Jan-2018.
- Refresher course in Physics under UGC – HRDC at Pt. Ravishankar University, Raipur, Chhattisgarh, December 2022

Supervision of Master's/Research students

	<u>Awarded</u>	<u>Ongoing</u>
Ph.D.	15	05
Master's Project (M. Phil.)	03	00
Master's Project (M. Sc./M. Tech.)	22	06

Ph.D. students (Awarded)

1. Pradeep Kumar Saroj
2. Mita Chatterjee (Co-Guide)
3. Nirmala Kumari (Co-Guide)
4. Soniya Chaudhary
5. Nidhi Dewangan
6. Brijendra Paswan
7. Manoj Kumar Singh
8. Abhinav Singhal
9. Kamlesh Kumar Pankaj
10. Juhi Baroi
11. Sonali Mandal
12. Suman Goyal
13. Shreeta Kumari
14. Sonal Nirwal
15. Subhashis Karmakar

Ph.D. students (ongoing)

1. Mahargha Biswas
2. Shreya Shukla
3. Kirti
4. Sharmistha Kar
5. Yashika Bhiraniya