SHISHIR GUPTA (EMERITUS FELLOW)

M.Phil., Ph.D
(Theoretical Seismology)
Department of Mathematics & Computing
Indian Institute of Technology (Indian School of Mines), Dhanbad, India
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Sectional President of Mathematical Sciences (including Statistics)
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Personal Details:

Date of Birth: Jan 25, 1959

Nationality: Indian

Designation: Emeritus Fellow

Contact: Department of Mathematics & Computing, Indian Institute of Technology(Indian School of Mines), Dhanbad, Jharkhand-826004

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Education:

1987 Ph.D (Applied Mathematics), Dept. of Applied Mathematics, Indian School of Mines, Dhanbad, India.

1985 M.Phil (Applied Mathematics),Dept. of Applied Mathematics, Indian School of Mines, Dhanbad, India (Ist Class).

1983 M.Sc (Mathematics), Dept. of Applied Mathematics, Ranchi University, Jharkhand, India (Ist class with Ist Rank in the University)

Specialization:

Theoretical Seismology, Numerical Methods and Special Functions

Professional Experience:

Feb 01, 2024 – Till Date Emeritus Fellow, Dept. of M&C, IIT (ISM) Dhanbad

Mar 24, 2021- Jan 31, 2024 Professor (Higher Academic Grade), Dept. of M&C, IIT (ISM) Dhanbad.

Oct, 2015 -Oct, 2018 Head, Dept. of Applied Mathematics, IIT (ISM) Dhanbad, Jharkhand, India.

2010 onwards Professor, Dept. of Applied Mathematics, IIT (ISM) Dhanbad, Jharkhand, India.

2006-2010 Associate Professor, Dept. of Applied Mathematics, ISM Dhanbad, Jharkhand, India.

2000-2006 Assistant Professor, Dept. of Applied Mathematics, ISM Dhanbad, Jharkhand, India.

1991-2000 Lecturer, Dept. of Applied Mathematics, ISM Dhanbad, Jharkhand, India.

1988-1991 Lecturer, Dept. of Mathematics, NIT Silchar (erstwhile REC Silchar), Assam, India.

Membership:

1. Life Fellow, Indian Mathematical Society.
2. Life Fellow, Indian Science Congress Association.
3. Affiliate Member, American Mathematical Society.
4. Life Member, Society of Applied Mathematics, IIT (ISM) Dhanbad.

Research Project undertaken:

1. **R & D Project:** SR/S4/ES-246/2006 From DST, (Earth Science Division), New Delhi, India
   Title: Investigation of torsional surface waves in non-homogeneous layered earth
   P.I.: Prof. (Dr.) Shishir Gupta
   Status: Completed on March 31, 2011.

2. **R & D Project:** SR/S4/MS-436/07from DST, New Delhi, India
   Title: Wave propagation in anisotropic media
   P.I.: Prof. (Dr.) A. Chattopadhyay
   Co. P.I.: Prof (Dr.) Shishir Gupta
   Status: Completed on March 31, 2012.

3. **R & D Project: Project No. 25(227)/13/EMR- II(2)** from CSIR, New Delhi, India
   Title: Study of torsional wave in anisotropic and non-homogeneous media
   P.I.: Prof. (Dr.) Shishir Gupta
   Co. P.I.: Dr. S. Kundu
   Status: Completed on November 30, 2016.

4. **R & D Project: Project No. 25(7865)/19EMR** from CSIR, New Delhi, India
   Title: Mathematical Modeling of Elastic Waves in Fractional Order Thermoelastic Solids with Micro-configurations and Initially Stressed Media
   P.I.: Prof. (Dr.) Shishir Gupta
   Status: Completed on May 14, 2022.

Dissertations Supervised:

Ph. D Awarded:

	Year	Name of Student	Title of Thesis	Name of Guide
1	**Jun, 2000**	Anand Mohan Prasad	A Study of Surface Waves in Homogeneous and Anelastic Media	**Prof. S. Gupta**
2	**Jul, 2005**	Pijus Kanti De	Propagation of Waves in Initially Stressed Medium	**Prof. S. Gupta & Prof. S. Dey**
3	**Dec, 2010**	Santimoy Kundu	Mathematical Modelling for propagation of	**Prof. S. Gupta**

			seismic waves in layered media	
4	**Apr,2012**	Dinesh Kumar Majhi	Propagation of Seismic wave in heterogeneous and anisotropic layered medium	**Prof. S. Gupta & Prof. Shalivahan**
5	**Feb, 2014**	Sumit Kumar Vishwakarma	Study of Some Problems of Seismic Wave in Inhomogeneous Elastic Medium	**Prof. S. Gupta**
6	**Jan, 2015**	Raju Dutta	Mathematical Modeling and Design for Optimized Power Consumption in Wireless Sensor Network	**Prof. S. Gupta & Dr. Mukul Das**
7	**Mar, 2016**	Samapti Kundu	Theoretical study of some problem on seismic wave propagation	**Prof. S. Gupta**
8	**Mar, 2017**	Rehena Sultana	Theoretical study of some problems on seismic wave propagation in anisotropic and non-homogeneous media	**Prof. S. Gupta**
9	**Jun, 2018**	Mostaid Ahmed	Modeling and Analysis of Seismic Wave Propagation in Elastic Medium	**Prof. S. Gupta**
10	**Aug, 2018**	Abhijit Pramanik	Mathematical Models to Study the Elastic Waves in Layered Media	**Prof. S. Gupta**
11	**July 2019**	Smita	Mathematical Analysis of Plane and Surface Waves in Anisotropic Stratified Media	**Prof. S. Gupta**
12	**Jan 2020**	Neelima Bhengra	Dispersive Attributes of Torsional, SH and Love type wave influenced by anisotropy, inhomogeneity and magnetoelasticity	**Prof. S. Gupta**
13	**Aug 2021**	Prasenjit Pati	Analysis of Dispersion Characteristics of Love, Torsional and Rayleigh Type Surface waves in Stratified Media	**Prof. S. Gupta & Dr. S. Kundu**
14	**Jan 2022**	Sandip Kumar Das	Theoretical Study on the Propagation of Seismic Waves through Elastic Layered Media	**Prof. S. Gupta**
15	**Oct 2022**	Soumik Das	Mathematical Modelling of seismic Waves on Layered Earth Media	**Prof. S. Gupta**
16	**Apr 2023**	Rachaita Dutta	Mathematical Modelling and Analysis of Elastic Waves in Layered Media	**Prof. S. Gupta**
17	**May 2023**	Snehamoy Pramanik	Mathematical Modelling to Study Wave Propagation in Elastic Solids	**Prof. S. Gupta**

Dissertation Supervised:

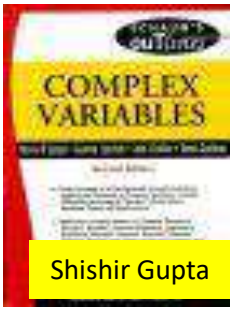
1. **M. Phil.** -Eleven Completed
2. **M. Sc.** -Ten Completed.

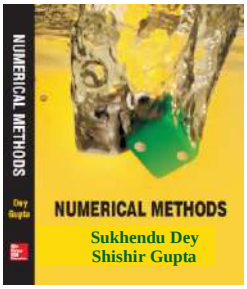
Books Written:

Complex Variable, Schaum's Outlines (SIE),

Authors: Murray R Spiegel, Seymour Lipschutz, John J Schiller, Dennis Spellman and **Shishir Gupta**

Publisher: Tata McGraw Hill Education Pvt. Ltd





Numerical Methods

Authors: Sukhendu Dey and **Shishir Gupta**

Publisher: McGraw Hill Education (India) Pvt. Ltd.

Reviewer of Journals:

1. Acta Geophysica, Springer
2. Canadian Journal of Physics
3. Mechanics of Advanced Materials and Structures
4. Soil Dynamics and Earthquake Engineering
5. Journal of Vibration & Control, SAGE.
6. Wave Motion
7. Arabian Journal of Geosciences

Administrative / Committee work attended:

1. Institutional level :

- Hostel Warden during 2002-2006
- Member Entrance Exam Committee 2004-2008
- Member of Academic Council
- Member Selection Board for M. Phil (Applied Mathematics)
- Coordinator of M. Phil -Applied Mathematics, 2010-2015
- Chairman, IIT (ISM)-JRF Admission Committee, 2014- 2017.

2. Departmental level :

- Head, Department of Applied Mathematics (Oct, 2015- Oct, 2018)
- Secretary of DAC in Department of Applied Mathematics (2008-2011)
- Convener/Chairman of M. Phil. Moderation Board in the Department of Applied Mathematics (2010-2013)
- Coordinator of M.Sc. (Mathematics& Computing) during 2004-2007
- Faculty in-charge of Training & Placement during 2007-2010
- In-charge of Departmental Computational Lab during 2004-2007
- Member of Moderation Board in the Department of Applied Mathematics during 2006-2009

- Member of BOCS in the Department of Applied Mathematics
- Member of Departmental Research Committee of Applied Mathematics during 2007-2009
- Member of Time table committee during 2007-2010.

Foreign Visit:

1. To present research paper in FOURTH MATHMOD in **Vienna University of Technology**, **Vienna, Austria** during Feb 5-7, 2003.

2. Invited Speaker at 89th Annual Meeting of Virginia Academy of Sciences at **Richmond University, USA** during May 25-27, 2011.

3. Invited to deliver Lecture on "Torsional surface waves" on May 31, 2011 at Department of Mathematics, **Hampton University, Hampton, VA, USA.**

Publications in Peer reviewed Journals(Total Publications : 180, SCIE–Indexed: 151)

1. Gupta, S., Dutta, R., & Das, S. (2024). Flexoelectric effect on SH-wave propagation in functionally graded fractured porous sedimentary rocks with interfacial irregularity. ***Journal of Vibration Engineering & Technologies***, *12*(1), 1067-1087. **(*JIF Quartile Q2, I.F.-2.7*)**

2. Bhengra, N., Kumhar, R. **Gupta, S.,** Kundu S. (2023) Vibrations analysis of propagation of SH-type wave influenced by a point source in a porous piezoelectric layered structure by Green's function approach , J. Earth Syst. Sci. 132:135, (***Impact Factor 1.912 , JCR Rank*** **Q3)**

3. Dutta, R., Das, S., **Gupta, S.,** Singh, A., Choudhary, H. (2023) Nonlocal fiber-reinforced double porous material structure under fractional-order heat and mass transfer, ***International Journal of Numerical Methods for Heat and Fluid Flow.*** (***JIF Quartile Q1, I.F.- 5.181***) (**Accepted**)

4. Kumari, C., Kundu, S., Maity, M., & Gupta, S. (2023). Analytical study of electro-mechanical parameters on Love wave in an imperfectly bonded VPCM layered structure. ***Mechanics Based Design of Structures and Machines***, *51*(10), 5510-5530. (***JIF Quartile Q1, I.F.- 3.9***)

5. Gupta, S., Dutta, R., & Das, S. (2023). Memory response in a nonlocal micropolar double porous thermoelastic medium with variable conductivity under Moore-Gibson-Thompson thermoelasticity theory**. *Journal of Ocean Engineering and Science***, *8*(3), 263-277. (***JIF Quartile Q1, I.F.- 7.1***)

6. Kumar, D., Kumhar, R., Kundu, S., & Gupta, S. (2023). Analysis the dispersive nature of Love wave in fibre-reinforced composite materials plate: A Green's function approach. ***Mathematical Methods in the Applied Sciences***, *46*(4), 3445-3462. (***JIF Quartile Q1, I.F.- 2.9***)

7. **Gupta, S.,** Dutta, R. Das, S. , Verma, AK. (2023), Double poro-magneto-thermoelastic model with micro-temperatures and initial stress under memory-dependent heat transfer, ***Journal***

of Thermal Stresses, *46*(8), 743-774. **(*JIF Quartile Q2, I.F.-2.8*)**

8. **Gupta, S.,** Dutta, R. Das, S. (2023), Flexoelectric Efect on SH-Wave Propagation in Functionally Graded Fractured Porous Sedimentary Rocks with Interfacial Irregularity, ***Journal of Vibration Engineering & Technologies,*** 12(1), 1067-1087. **(*JIF Quartile* Q2, I.F.-2.7)**

9. Rajak, B.P., Kundu, S., **Gupta, S.** (2023) Study of the dynamic electro-mechanical and microstructural behaviour on the elastic wave in FGM/FGPM composite structure: WKB asymptotic approach, ***Waves in Random and Complex Media***, 1-33. DOI: 10.1080/17455030.2023.2226782. ***JCR Quartile-Q1 Impact Factor 4.853***

10. **Gupta, S.**, Dutta, R., Das, S. (2022) Photothermal excitation of an initially stressed nonlocal semiconducting double porous thermoelastic material under fractional order triple-phase-lag theory. ***International Journal of Numerical Methods for Heat & Fluid Flow***, *32*(12), 3697-3725. ***(SCIE & JIF Quartile Q1 Impact Factor* 5.181)**

11. **Gupta, S.**, Das, S. K., Pramanik, S. (2022) Reflection and transmission phenomena of SH waves in fluid saturated porous medium with corrugated interface. ***Mechanics of Advanced Materials and Structures***, 29(26), 5122-5141. ***(SCIE Enlisted & JIF Quartile Q2) Impact Factor* 3.338**

12. **Gupta, S.,** Das, S., Dutta, R., Verma, A. K. (2022). Higher-order fractional and memory response in nonlocal double poro-magneto-thermoelastic medium with temperature-dependent properties excited by laser pulse. **Journal of Ocean Engineering and Science**. ***Impact Factor 4.803 , JCR Rank* Q1**

13. **Gupta, S.,** Dwivedi, R., Rai, P., Das, S. K. (2022). Analysis of thermal effect on propagation of Rayleigh surface waves in a composite structure. **Journal of Earth System Science**, 131(1), 1-9. ***Impact Factor 1.912 , JCR Rank* Q3**

14. **Gupta, S.,** Das, S. K. (2022). Effect of inhomogeneity, initial stress, sandiness, and viscosity on the propagation of torsional wave. **Boletín de la Sociedad Matemática Mexicana**, 28(1), 1-14.

15. **Gupta, S.,** Dutta, R., Das, S., Pandit, D. K. (2022). Hall current effect in double poro-thermoelastic material with fractional-order Moore–Gibson–Thompson heat equation subjected to Eringen's nonlocal theory. **Waves in Random and Complex Media**, 1-36. ***Impact Factor 4.051 , JCR Rank* Q2**

16. **Gupta, S.,** Das, S., Dutta, R. (2023). Peltier and Seebeck effects on a nonlocal couple stress double porous thermoelastic diffusive material under memory-dependent Moore-Gibson-Thompson theory. **Mechanics of Advanced Materials and Structures**, 1-24. ***Impact Factor 3.338 , JCR Rank* Q2**

17. **Gupta, S.,** Dutta, R., Das, S. (2021). Analytical approach to determine the impact of line source on SH-wave propagation in an anisotropic poro-viscoelastic layered structure in the context

of Eringen's nonlocal elasticity theory. **Soil Dynamics and Earthquake Engineering**, 151, 106987.

18. **Gupta, S.**, Das, S., Dutta, R. (2021) Nonlocal stress analysis of an irregular FGFPM structure imperfectly bonded to fiber-reinforced substrate subjected to moving load. ***Soil Dynamics and Earthquake Engineering***, *147*, 106744. ***Impact Factor 2.637 , JCR Rank* Q2**

19. **Gupta, S.**, Pramanik, S., Das, S. K., Saha, S. (2021) Dynamic analysis of wave propagation and buckling phenomena in carbon nanotubes (CNTs). ***Wave Motion***, *104*, 102730. ***Impact Factor 1.563 , JCR Rank* Q2**

20. **Gupta, S.**, Dwivedi, R., Smita, Dutta, R. (2021) Rayleigh wave propagation at the boundary surface of dry sandy (SiO_2) thermoelastic solids. ***Engineering Computations***. DOI: 10.1108/EC-04-2020-0231. ***Impact Factor 1.322 , JCR Rank* Q3**

21. **Gupta, S.**, Dutta, R., Das, S. (2021). Love-type wave propagation in an inhomogeneous cracked porous medium loaded by heterogeneous viscous liquid layer. ***Journal of Vibration Engineering & Technologies***, *9*(3), 433-448. ***Impact Factor 0.537 , JCR Rank* Q4**

22. Chowdhury, S., Kundu, S., Alam, P., **Gupta, S.** (2021) Dispersion of Stoneley waves through the irregular common interface of two hydrostatic stressed MTI media. *Scientia Iranica*, *28*(2), 837-846. ***Impact Factor 1.017 , JCR Rank* Q3**

23. **Gupta, S.**, Das, S., Dutta, R. (2021) Finite difference modeling of shear wave propagation in multilayered fractured porous structures. ***Arabian Journal of Geosciences***, *14*(3), 1-19. ***Impact Factor 1.327 , JCR Rank* Q4**

24. **Gupta, S.**, Das, S. K., Pramanik, S. (2021) Impact of Irregularity, Initial Stress, Porosity, and Corrugation on the Propagation of SH Wave. ***International Journal of Geomechanics***, *21*(2), 04020245. ***Impact Factor 2.589 , JCR Rank* Q2**

25. **Gupta, S.**, Das, S., Dutta, R. (2023) Influence of gravity, magnetic field, and thermal shock on mechanically loaded rotating FGDPTM structure under Green-Naghdi theory. ***Mechanics Based Design of Structures and Machines***, 1-29. ***Impact Factor2.286 , JCR Rank* Q2**

26. Kumar, D., Kundu, S., Kumhar, R., **Gupta, S.** (2020) Vibrational analysis of Love waves in a viscoelastic composite multilayered structure. ***Acta Mechanica***, *231*(10), 4199-4215. ***Impact Factor 2.102 , JCR Rank* Q3**

27. Kumhar, R., Kundu, S., Maity, M., **Gupta, S.** (2020) Analysis of interfacial imperfections and electro-mechanical properties on elastic waves in porous piezo-composite bars, ***International Journal of Mechanical Sciences*** DOI: 10.1016/j.ijmecsci.2020.105926**, *Impact Factor 4.631 , JCR Rank* Q1**

28. Kumhar, R., Kundu, S., Pandit, D.K., **Gupta, S.** (2020) Green's function and surface waves in viscoelastic orthotropic FGM enforced by an impulsive source, ***Applied Mathematics and Computation*** 382,125325, ***Impact Factor 3.472, JCR Rank* Q1**.

29. Kumhar, R., Kundu, S., **Gupta, S.** (2020) Modelling of Love waves in fluid saturated porous viscoelastic medium resting over an exponentially graded inhomogeneous half-space influenced by gravity, ***Journal of Applied and Computational Mechanics*** 6 (3), 517-530.

30. Maity, M., Kundu, S., Kumhar, R., **Gupta, S.** (2020). Influence of mechanical imperfections on the transference of Love type waves in viscoelastic substrate overlaid by visco-micropolar Composite structure, ***Engineering Computations*** DOI:10.1108/EC-01-2020-0026, ***Impact Factor 1.332, JCR Rank*** **Q3**.

31. Chowdhury, S., Kundu, S., Alam, P., **Gupta, S.** (2020). Dispersion of Stoneley waves through the irregular common interface of two hydrostatic media, ***Scientia Iranica***.

32. Kumari, C., Kundu, S., Kumari, A., **Gupta, S.** (2020). Analysis of dispersion and damping characteristics of Love wave propagation in orthotropic viscoelastic FGM layer with corrugated boundaries, ***International Journal of Geomechanics*** 20 (2), 04019172, ***Impact Factor 2.589, JCR Rank*** **Q2**.

33. Maity, M., Kundu, S., Kumari, A., **Gupta, S.** (2020). Comparative study of torsional Wave profiles through stratified media with fluted boundaries, ***Structural Engineering and Mechanics*** 74 (1), 91-104, ***Impact Factor 2.984 JCR Rank*** **Q1**

34. Kundu, S., Kumhar, R., Maity, M., **Gupta, S.** (2020). Influence of point source on Love type waves in anisotropic layer overlying viscoelastic FGM half space: Green's function approach, ***International Journal of Geomechanics*** 20 (1), 04019141, ***Impact Factor 2.589, JCR Rank*** **Q2**.

35. Kumhar, R., Kundu, S., Maity, M., **Gupta, S.** (2020). Study of Love type wave vibrations in double sandy layers on half space of viscoelastic, ***Multidiscipline Modeling in Materials and Structures***.

36. Kumhar, R., Kundu, S., Maity, M., **Gupta, S.** (2019). Mechanical waves study in tri-materials bars having sinusoidally interfaces (i.e. Fiber-reinforced poroelastic and isotropic), ***Materials Research Express***, 6 (12), 125335, ***Impact Factor 1.929, JCR Rank*** **Q3**.

37. Kumari, A., Kundu, S., **Gupta, S.** (2019). Propagation and attenuation characteristics of Rayleigh waves included due to irregular saturated micropolar porous half space, ***The European Physical Journal Plus*** 134 (11), 576,***Impact Factor 3.228, JCR Rank*** **Q1**.

38. **Gupta, S.**, Kundu, S., Pati, P. (2019). Torsional waves in a fiber composite medium at a loosely bonded interface constrained between dry sandy layer and gravitating poroelastic substrate, ***International Journal of Computational Methods*** 16(06), 1840030, ***Impact Factor 1.716, JCR Rank*** **Q2.**

39. **Gupta, S.,** Bhengra, N. (2019). Influence of magnetoelasticity on frequency equation of Shear wave propagation in a multilayered magnetoelastic anisotropic monoclinic medium. **Applied Mathematics and Computation**, 355, 366-384. ***(SCI-Indexed) Impact Factor 3.472, JCR***

Rank Q1.

40. **Gupta, S.,** Ahmed, M., & Verma, A. K. (2019). Analysis of Rayleigh waves in micropolar thermoelastic solid over a dual-phase-lag semi-infinite thermoelastic substrate under interfacial imperfections. **International Journal of Geomechanics**, 19(5), 04019038**.** ***(SCI-Indexed) Impact Factor 2.589, JCR Rank Q2.***

41. Saha, A., Kundu, S.**, Gupta, S.**, Vaishnav, P. K. (2019). Effect of Irregularity on Torsional Surface Waves in an Initially Stressed Porous Layer Sandwiched Between Two Non-homogeneous Half-Spaces. **Proceedings of the National Academy of Sciences, India Section A: Physical Sciences,** 89(1), 171-183, ***(SCIE-Indexed) Impact Factor 0.921***, ***JCR Rank Q3.***

42. **Gupta, S.,** Bhengra, N. (2019). Dispersion and absorption study of SH waves in sinusoidally corrugated heterogeneous viscoelastic layer sandwiched between heterogeneous isotropic half-space and magnetoelastic monoclinic half-space. **Waves in Random and Complex Media**, 1-23. ***(SCIE-Indexed) Impact Factor 3.33, JCR Rank Q1.***

43. **Gupta, S.,** Ahmed, M., & Misra, J. C. (2019). Effects of periodic corrugated boundary surfaces on plane SH-waves in fiber-reinforced medium over a semi-infinite micropolar solid under the action of magnetic field. **Mechanics Research Communications**, 95, 35-44. ***(SCI-Indexed) Impact Factor 2.282, JCR Rank Q2.***

44. Kundu, S., Maity, M., Pandit, D. K., & **Gupta, S.** (2019). Effect of initial stress on the propagation and attenuation characteristics of Rayleigh waves. **Acta Mechanica**, 230(1), 67-85. ***(SCI-Indexed) Impact Factor 2.102, JCR Rank Q3.***

45. **Gupta, S.**, Kundu, S., Pati, P., Ahmed, M. (2018). Torsional waves in fluid saturated porous layer clamped between two anisotropic media. ***Geomechanics and Engineering***, *15*(1), 645-657. ***(SCI-Indexed) Impact Factor 2.485, JCR Rank Q2.***

46. Kundu, S., Kumari, A., & **Gupta, S.** (2018). Three-dimensional Green's function approach for analysis of dispersion and attenuation curve in fibre-reinforced heterogeneous viscoelastic layer due to a point source. ***Applied Mathematics and Computation***, *338*, 387-399. ***(SCI-Indexed) Impact Factor 3.472, JCR Rank Q1.***

47. **Gupta, S.,** Smita, & Pramanik, S. (2018). Behavior of Rayleigh surface waves in an anisotropic media lying over a prestressed orthotropic half-space. ***Mechanics of Advanced Materials and Structures*****,** *25*(12), 1058-1067. ***(SCI-Indexed) Impact Factor 3.517, JCR Rank Q1.***

48. **Gupta, S.,** Bhengra, N., & Ahmed, M. (2018). The study of reflection/transmission phenomena in a corrugated interface between two magnetoelastic transversely isotropic media. ***Arabian Journal of Geosciences*****,** *11*(17), 526. ***(SCI-Indexed) Impact Factor 1.327, JCR Rank Q4.***

49. **Gupta, S.,** Pramanik, A., Ahmed, M. (2018). Impact of pre-stress, inhomogeneity and porosity on the propagation of Love wave. ***Acta Geophysica***, 66(2), 1-12. ***(SCI-Indexed) Impact Factor 1.395, JCR Rank Q3.***

50. **Gupta, S.,** Smita, Pramanik, S., Pramanik, A. (2018). A comparative analysis (real-time data and theoretical results) for propagation of SH waves in a viscoelastic model influenced by a point source. ***Mathematics and Mechanics of Solids***, 1081286518764759. ***(SCI-Indexed) Impact Factor 2.04, JCR Rank Q2.***

51. **Gupta, S.,** Bhengra, N. (2018). Study of the surface wave vibrations in a functionally graded material layered structure: a WKB method. ***Mathematics and Mechanics of Solids***, 1081286518778328. ***(SCI-Indexed) Impact Factor 2.935, JCR Rank Q2.***

52. **Gupta, S.,** Pati, P. (2018). Generation of torsional waves in a viscoelastic medium bounded by heterogeneous crustal layer and orthotropic substrate. ***AIP Conference Proceedings* 19759(1), AIP Publishing.**

53. Maity, M., Kundu, S., Kr. Pandit, D., &**Gupta, S.** (2018). Characteristics of Torsional Wave Profiles in a Viscous Fiber-Reinforced Layer Resting over a Sandy Half-Space under Gravity. ***International Journal of Geomechanics***, *18*(7), 06018015.***(SCI-Indexed) Impact Factor 2.589, JCR Rank Q2.***

54. **Gupta, S.**, Smita, Pramanik, S., &Pramanik, A. (2018). Effect of dry sandiness parameter and initial stress on the scattering of plane SH wave. ***Arabian Journal of Geosciences***, *11*(9), 220. ***(SCI-Indexed) Impact Factor 1.327, JCR Rank Q4.***

55. Alam, P., Kundu, S., **Gupta, S.** (2018). Love-type wave propagation in a hydrostatic stressed magneto-elastic transversely isotropic strip over an inhomogeneous substrate caused by a disturbance point source. ***Journal of Intelligent Material Systems and Structures*****,** 1045389X18770877. ***(SCI-Indexed) Impact Factor 2.41, JCR Rank Q3.***

56. **Gupta, S.,** Pramanik, A., Smita, Pramanik, S. (2018). Scattering of three-dimensional plane waves in a self-reinforced half-space lying over a triclinic half-space. ***Journal of Geophysics and Engineering*****,** *15*(3), 759. ***(SCI-Indexed) Impact Factor 1.624, JCR Rank Q3.***

57. Alam, P., Kundu, S., **Gupta, S.** (2018). Effect of magneto-elasticity, hydrostatic stress and gravity on Rayleigh waves in a hydrostatic stressed magneto-elastic crystalline medium over a gravitating half-space with sliding contact. ***Mechanics Research Communications*****,** *89*, 11-17. ***(SCI-Indexed) Impact Factor 2.282, JCR Rank Q2.***

58. Alam, P., Kundu, S., **Gupta, S.,** Saha, A. (2018). Study of torsional wave in a poroelastic medium sandwiched between a layer and a half-space of heterogeneous dry sandy media. ***Waves in Random and Complex Media***, *28*(1), 182-201. ***(SCI-Indexed) Impact Factor 3.33, JCR Rank Q1.***

59. Alam, P., Kundu, S., **Gupta, S.** (2018). Dispersion and Attenuation of Love-Type Waves Due to a Point Source in Magneto-Viscoelastic Layer. ***Journal of Mechanics***, 1-16. ***(SCI-Indexed) Impact Factor 1.293, JCR Rank Q4.***

60. **Gupta, S.,** Ahmed, M., (2017) Love waves in dry sandy medium sandwiched between fiber-reinforced layer and prestressed porous half-space, ***Earthquakes and Structures, An International Journal***, (Accepted) ***(SCI-Indexed) Impact Factor 1.714, JCR Rank Q3.***

61. Alam, P., Kundu, S., **Gupta, S.,** Saha, A., (2017) Study of torsional wave in a poroelastic medium sandwiched between a layer and a half-space of heterogeneous dry sandy media, ***Waves in Random and Complex Media***, (Accepted). ***(SCI-Indexed) Impact Factor 3.33, JCR Rank Q1.***

62. **Gupta S.,** Bhengra N., (2017) Implementation of finite difference approximation on the SH-wave propagation in a multilayered magnetoelastic orthotropic composite medium, ***Acta Mechanica,*** 228(10), 3421-3444. (***SCI-Indexed) Impact Factor 2.102, JCR Rank Q3.***

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