Curriculum Vitae

Dr. T. Raja Sekhar,
Associate Professor,
Department of Mathematics,
Indian Institute of Technology Kharagpur,
Kharagpur - 721302,
West Bengal, India.

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PROFESSIONAL EXPERIENCE:

- Associate Professor, Department of Mathematics, Indian Institute of Technology Kharagpur, May 2019 - Till Date.
- Assistant Professor, Department of Mathematics, Indian Institute of Technology Kharagpur, August 2013 - May 2019.
- Assistant Professor, Department of Mathematics, National Institute of Technology Rourkela, October 2008 - August 2013.
- Lecturer, Mathematics Group, Birla Institute of Technology and Science, Hyderabad Campus, July 2008 - September 2008.
- Lecturer, Mathematics Group, Birla Institute of Technology and Science, Pilani Campus, May 2008 - July 2008.
- Research Associate, Department of Mathematics, Indian Institute of Technology Bombay, November 2007 - April 2008.

EDUCATIONAL QUALIFICATIONS:

- **Doctor of Philosophy (Ph.D.) Mathematics**
  - **Thesis Title:** On Certain Problems Associated with Hyperbolic Systems of Conservation Laws
  - **Institute:** Indian Institute of Technology Bombay, India
  - **Graduation:** March 2008
- **Master of Science (M.Sc.) Mathematics**

  - **University:** University of Hyderabad (Hyderabad Central University), Gachibowli, Hyderabad, India
  - **Graduation:** May 2002

- **Bachelor of Science (B.Sc.)**
  - **University:** Andhra Loyola College (Vijayawada), Nagarjuna University
  - **Graduation:** June 2000
  - **Major Subjects:** Mathematics, Physics, Chemistry

- **Intermediate:**
  - **University:** Board of Intermediate Education, Andhra Pradesh
  - **Graduation:** May 1997
  - **Major subjects:** Mathematics, Physics, Chemistry

- **Secondary School (10th Class):**
  - **University:** Board of Secondary Education, Andhra Pradesh
  - **Graduation:** May 1995

SPONSORED RESEARCH PROJECTS:

- **Title of the Project:** Analytical Study of Delta Shock Waves for Certain Hyperbolic System of Conservation Laws
  - **Sponsoring Agency:** SERB, DST, Government of India
  - **Project Duration:** 3 years (February 15, 2020 - February 14, 2023)
  - **Total Budget:** Rs. 6.60 Lakhs
  - **Principal Investigator:** Dr. T. Raja Sekhar

- **Title of the Project:** Delta Shock Waves and Wave Interactions in Hyperbolic System of Conservation Laws
  - **Sponsoring Agency:** SERB, DST, Government of India
  - **Project Duration:** 3 years (August 2014 - July 2017)
  - **Total Budget:** Rs. 10.92 Lakhs
  - **Principal Investigator:** Dr. T. Raja Sekhar

- **Title of the Project:** Symmetry Analysis and Nonlinear Waves for Quasilinear Hyperbolic Systems

- **Sponsoring Agency:** ISIRD, SRIC, IIT Kharagpur
- **Project Duration:** 3 years (June 2014 - May 2017)
- **Total Budget:** Rs. 2.45 Lakhs
- **Principal Investigator:** Dr. T. Raja Sekhar

- **Title of the Project:** Analytical and Numerical Study of Riemann Problems for Quasi-linear Hyperbolic System of Conservation Laws
  - **Sponsoring Agency:** National Board for Higher Mathematics, Department of Atomic Energy, Government of India
  - **Project Duration:** 3 years (July 2011 - June 2014)
  - **Total Budget:** Rs. 10.91 Lakhs
  - **Principal Investigator:** Dr. T. Raja Sekhar

EDITORIAL BOARD:

1. Member of Editorial Board for International Journal of Applied and Computational Mathematics (Springer) from January 2014-Till Date
2. Guest Editor for special issue on "Analytical and numerical methods for solving partial differential equations and integral equations arising in physical models" published by the journal of "Abstract and Applied Analysis"
3. Guest Editor for special issue on "Advances in Lie groups and applications in applied sciences" published by the journal of "Abstract and Applied Analysis"

PUBLICATIONS IN REFERRED JOURNALS:

1. Rahul Barthwal, **T. Raja Sekhar** and G.P. Raja Sekhar, *Construction of solutions of a two-dimensional Riemann problem for a thin film model of a perfectly soluble anti-surfactant solution,* Accepted for publication in Mathematical Methods in the Applied Sciences (Wiley).
2. Sueet Millon Sahoo, **T. Raja Sekhar** and G.P. Raja Sekhar, *Wave interactions in pressureless Cargo-LeRoux model with flux perturbation,* Accepted for publication in Mathematical Methods in the Applied Sciences (Wiley).
3. Balakrishna Chhatria, Anupam Sen and **T. Raja Sekhar**, *Self-similar viscosity approach to the Riemann problem for a strictly hyperbolic system of conservation laws,* Mathematical Methods in the Applied Sciences (Wiley) (Article in Press).

4. Dia Zeidan, Sumita Jana, Sahadeb Kuila, **T. Raja Sekhar**, *Solution to the Riemann problem for drift-flux model with modified Chaplygin two-phase flows*, International Journal for Numerical Methods in Fluids (Wiley) (Article in Press).

5. Anupam Sen and **T. Raja Sekhar**, *The multiplication of distributions in the study of delta shock waves for zero-pressure gasdynamics system with energy conservation laws,* Ricerche di Matematica (Springer) (Article in Press).

6. Subhankar Sil and **T. Raja Sekhar**, *Nonclassical potential symmetry analysis and exact solutions for a thin film model of a perfectly soluble anti-surfactant solution,* Applied Mathematics and Computation (Elsevier) 440 (2022), no. 3, 127660.

7. Subhankar Sil and **T. Raja Sekhar**, *Nonlocal conservation laws and dynamics of soliton solutions of (2+ 1)-dimensional Boiti-Leon-Pempinelli system,* Physics of Fluids (American Institute of Physics), 34(2022), no. 11, 117113.

8. Purnima Satapathy and **T. Raja Sekhar**, *Analytic solutions for (2+ 1)-dimensional shallow water equations with flat bottom through Lie symmetry approach*, The European Physical Journal Plus (Springer), 137(2022), no. 10, 20 pp.

9. Rahul Barthwal and **T. Raja Sekhar**, *Two-dimensional non self-similar Riemann solutions for a thin film model of a perfectly soluble anti-surfactant solution*, Quarterly of Applied Mathematics (American Mathematical Society), 80(4), 717-738, (2022).

10. Sahadeb Kuila, D.Zeidan and **T. Raja Sekhar**, *Weak shock wave interactions in isentropic Cargo-LeRoux model of flux perturbation,* Mathematical Methods in the Applied Sciences (Wiley) 45 (2022), no. 12, 7526-7537.

11. Rahul Barthwal and **T. Raja Sekhar**, *On the existence and regularity of solutions of semi-hyperbolic patches to 2-D Euler equations with van der Waals gas,* Studies in Applied Mathematics (Wiley-MIT Press) 148 (2022), no. 2, 543-576.

12. Rahul Barthwal and **T. Raja Sekhar**, *Simple waves for two-dimensional magnetohydrodynamics with extended Chaplygin gas,* Indian Journal of Pure and Applied Mathematics (Springer) 53 (2022), no. 2, 542-549.

13. Minhajul and **T. Raja Sekhar**, Collision of nonlinear waves in logotropic system with a Coulomb-type friction, Sadhana (Springer) 47 (2022), no. 2, 10 pp.

14. Subhankar Sil and **T. Raja Sekhar**, *Nonclassical symmetry analysis, conservation laws of one-dimensional macroscopic production model and evolution of nonlinear waves,* Journal of Mathematical Analysis and Applications (Elsevier) 497 (2021), no. 1,124847, 27pp.

15. Anupam Sen and **T. Raja Sekhar**, *The limiting behavior of the Riemann solution to the isentropic Euler system for logarithmic equation of state with a source term,* Mathematical Methods in the Applied Sciences (Wiley) 44 (2021), no. 8, 7207-7227.

16. Minhajul and **T. Raja Sekhar**, *Nonlinear wave interactions in a macroscopic production model,* Acta Mathematica Scientia (Springer) 41B (2021), no. 3, 764-780.

17. Purnima Satapathy, **T. Raja Sekhar** and Dia Zeidan, *Codimension two Lie invariant solutions of the modified Khokhlov-Zabolotskaya-Kuznetsov equation,* Mathematical Methods in the Applied Sciences (Wiley) 44 (2021), no. 6, 4938-4951.

18. Subhankar Sil, **T. Raja Sekhar** and Dia Zeidan, *Nonlocal conservation laws, nonlocal symmetries and exact solutions of an integrable soliton equation,* Chaos, Solitons & Fractals (Elsevier) 139 (2020) 110010.

19. Sueet Millon Sahoo, **T. Raja Sekhar** and G. P. Raja Sekhar, *Optimal classification, exact solutions, and wave interactions of Euler system with large friction*, Mathematical Methods in the Applied Sciences (Wiley) 43 (2020), no. 9, 5744-5757.

20. Anupam Sen and **T. Raja Sekhar**, *Delta shock wave and wave interactions in a thin film of a perfectly soluble anti-surfactant solution,* Communications on Pure and Applied Analysis (American Institute of Mathematical Science) 19 (2020), no. 5, 2641-2653.

21. Subhankar Sil and **T. Raja Sekhar**, *Nonlocally related systems, nonlocal symmetry reductions and exact solutions for one-dimensional macroscopic production model,* The European Physical Journal Plus (Springer) 35 (2020), no. 6, 1-23.

22. Sueet Millon Sahoo, **T. Raja Sekhar** and G. P. Raja Sekhar, *Exact solutions of generalized Riemann problem for nonhomogeneous shallow water equations,* Indian Journal of Pure and Applied Mathematics (Springer) 51 (2020), no. 3, 1225-1237.

23. Anupam Sen, **T. Raja Sekhar** and D. Zeidan, *Stability of the Riemann solution for a* 2×2 *strictly hyperbolic system of conservation laws,* Sadhana (Springer)44(2019), no. 11, 8 pp.

24. Anupam Sen and **T. Raja Sekhar**, *Delta shock wave as self-similar viscosity limit for a strictly hyperbolic system of conservation laws,* Journal of Mathematical Physics (American Institute of Physics) 60 (2019), no. 5, 051510, 12 pp.

25. Minhajul and **T. Raja Sekhar**, *Interaction of elementary waves with a weak discontinuity in an isothermal drift-flux model of compressible two-phase flows,* Quarterly of Applied Mathematics (American Mathematical Society) 77 (2019), no. 3, 671-688.

26. Minhajul, **T. Raja Sekhar** and G. P. Raja Sekhar, *Stability of solutions to the Riemann problem for a thin film model of a perfectly soluble anti-surfactant solution,* Communications on Pure and Applied Analysis (American Institute of Mathematical Sciences) 18 (2019), no. 6, 3389-3408.

27. Sueet Millon Sahoo, **T. Raja Sekhar** and G. P. Raja Sekhar, *Exact solutions of generalized Riemann problem for rate-type material,* International Journal of Nonlinear Mechanics (Elsevier) 110 (2019), 16-20.

28. Anupam Sen and **T. Raja Sekhar**, *Structural stability of the Riemann solution for a strictly hyperbolic system of conservation laws with flux approximation,* Communications on Pure and Applied Analysis (American Institute of Mathematical Science) 18, no. 2, (2019), 931-942.

29. Bibekananda Bira, **T. Raja Sekhar** and Dia Zeidan, *Exact solutions for some time-fractional evolution equations using Lie group theory,* Mathematical Methods in the Applied Sciences (Wiley), 41, no. 16, (2018) 6717-6725.

30. Purnima Satapathy and **T. Raja Sekhar**, *Nonlocal symmetries classifications and exact solution of Chaplygin gas equations,* Journal of Mathematical Physics (American Institute of Physics) 59, no.8, (2018) 081512, 13 pp.

31. Purnima Satapathy and **T. Raja Sekhar**, *Optimal system, invariant solutions and evolution of weak discontinuity for isentropic drift flux model,* Applied Mathematics and Computation (Elsevier) 334 (2018) 107-116.

32. B. Bira, **T. Raja Sekhar** and G. P. Raja Sekhar, *Collision of characteristic shock with weak discontinuity in non-ideal magnetogasdynamics,* Computers & Mathematics with Applications (Elsevier) 75, no.11 (2018) 3873-3883..

33. Minhajul, D. Zeidan and **T. Raja Sekhar,** *On the wave interactions in the drift-flux equations of two-phase flows,* Applied Mathematics and Computation (Elsevier) 327 (2018) 117-131.

34. Sahadeb Kuila and **T. Raja Sekhar,** *Interaction of weak shocks in drift-flux model of compressible two-phase flows,* Chaos, Solitons and Fractals (Elsevier) 107 (2018) 222-227.

35. **T. Raja Sekhar** and Minhajul, *Elementary wave interactions in blood flow through artery,* Journal of Mathematical Physics (American Institute of Physics) 58, no.10, (2017) 101502, 20 pp.

36. Anupam Sen, **T. Raja Sekhar** and V. D. Sharma, *Wave interactions and stability of the Riemann solution for a strictly hyperbolic system of conservation laws,* Quarterly of Applied Mathematics (American Mathematical Society) 75 (3) (2017) 539-554.

37. **T. Raja Sekhar** and Purnima Satapathy, *Group classification for isothermal drift flux model of two phase flows,* Computers & Mathematics with Applications (Elsevier) 72(5) (2016) 1436-1443.

38. Sahadeb Kuila, **T. Raja Sekhar** and G. C. Shit, *Solution to the Riemann problem for a five-equation model of multiphase flows in non-conservative form,* Sadhana (Springer) 41 (9) (2016), 1099-1109.

39. Sahadeb Kuila and **T. Raja Sekhar**, *Riemann solution for one dimensional non-ideal isentropic magnetogasdynamics,* Computational and Applied Mathematics (Springer) 35(1) (2016) 119-133.

40. Sahadeb Kuila, **T. Raja Sekhar** and G. C. Shit, *The Riemann problem for non-ideal isentropic compressible two phase flows,* International Journal of Nonlinear Mechanics (Elsevier) 81 (2016) 197-206.

41. Sahadeb Kuila, **T. Raja Sekhar** and D. Zeidan, *On the Riemann problem simulation for the drift-flux equations of two-phase flows,* International Journal of Computational Methods (World Scientific Publishing Company) 13 (2016) no 1, 1650009, 22pp.

42. B. Bira, **T. Raja Sekhar** and D. Zeidan, *Application of Lie groups to compressible model of two-phase flows,* Computers and Mathematics with Applications (Elsevier) 71 (2016) no 1, 46-56.

43. Sahadeb Kuila, **T. Raja Sekhar** and D. Zeidan, *A robust and accurate Riemann solver for a compressible two phase flow model,* Applied Mathematics and Computation (Elsevier) 265 (2015), 681-695.

44. B. Bira and **T. Raja Sekhar**, *Exact solutions to magnetogasdynamic equations in Lagrangian coordinates,* Journal of Mathematical Chemistry (Springer), 53 (2015), no 2, 1162-1171.

45. B. Bira and **T. Raja Sekhar**, *Exact solutions to drift-flux multi phase flow models through Lie group symmetry analysis,* Applied Mathematics and Mechanics (Springer), 36 (2015), no 8, 1105-1112.

46. B. Bira and **T. Raja Sekhar**, *Lie group analysis and propagation of weak discontinuity in one-dimensional ideal isentropic magnetogasdynamics,* Applicable Analysis (Taylor & Francis), 93 (2014), no.12, 2598-2607.

47. Sahadeb Kuila and **T. Raja Sekhar**, *Riemann solution for ideal isentropic magnetogasdynamics,* Meccanica (Springer) 49 (2014), no. 10, 2453-2465.

48. B. Bira and **T. Raja Sekhar**, *Symmetry group analysis and exact solutions of isentropic magnetogasdynamics,* Indian Journal of Pure and Applied Mathematics (Springer) 44 (2013), no. 2, 153-165.

49. B. Bira and **T. Raja Sekhar**, *Exact solutions to magnetogasdynamics using Lie point symmetries,* Meccanica (Springer) 48 (2013), no. 5, 1023-1029.

50. **T. Raja Sekhar** and B. Bira, *Wave features and group analysis for axisymmetric flow of shallow water equations,* International Journal of Nonlinear Science (Academic, UK), 14 (2012), no. 1, 23-30.

51. **T. Raja Sekhar** and V. D. Sharma, *Solution to the Riemann problem in a one dimensional magnetogasdynamic flow,* International Journal of Computer Mathematics (Taylor & Francis), 89 (2012), no. 2, 200-216.

52. **T. Raja Sekhar** and V.D. Sharma, *Similarity analysis of modified shallow water equations and evolution of weak waves*, Communications in Nonlinear Science and Numerical Simulation (Elsevier), 17 (2012), no. 2, 630-636.

53. **T. Raja Sekhar** and V. D. Sharma, *Wave interactions for the pressure gradient equations,* Methods and Applications of Analysis, (International Press, Boston, USA) 17 (2010), no. 2, 165-178.

54. **T. Raja Sekhar** and V. D. Sharma, *Evolution of weak discontinuities in shallow water equations,* Applied Mathematics Letters (Elsevier), 23 (2010), no. 3, 327-330.

55. **T. Raja Sekhar** and V. D. Sharma, *Riemann problem and elementary wave interactions in isentropic magnetogasdynamics,* Nonlinear Analysis: Real World Applications (Elsevier), 11 (2010), no. 2, 619-636.

56. **T. Raja Sekhar** and V. D. Sharma, *Interaction of shallow water waves,* Studies in Applied Mathematics (MIT, USA), 121 (2008), no. 1, 1-25.

57. **T. Raja Sekhar** and V.D. Sharma, *Similarity solutions for three dimensional Euler equations using Lie group analysis,* Applied Mathematics and Computation (Elsevier), 196 (2008), no. 1, 147-157.

RESEARCH INTERESTS:

- Hyperbolic Conservation Laws
- Lie Group Analysis for Partial Differential Equations

PhD students completed:

1. Bibekananda Bira: Thesis Title: Lie Group Analysis and Evolution of Weak Waves for Certain Hyperbolic System of Partial Differential Equations (Date of defence: December 17, 2014).

2. Sahadeb Kuila: Thesis Title: Analytical and Numerical Study of Riemann Problems for Quasilinear Hyperbolic System of Conservation Laws. (Date of defence: October 20, 2016).

3. Purnima Satapathy: Thesis Title: Local and Nonlocal Symmetries of Quasilinear Partial Differential Equations. (Date of defence: March 28, 2019).

4. Minhajul: Thesis Title: Wave Interactions in Certain One-Dimensional Hyperbolic System of Conservation Laws. (Date of defence: September 3, 2019).

5. Sueet Millon Sahoo: Thesis Title: Exact solutions to certain hyperbolic partial differential equations with source terms and their applications. (Date of defence: August 12, 2021) (Jointly with Prof. G. P. Raja Sekhar).

6. Anupam Sen: Thesis Title: Analytical study of delta shock waves in certain one-dimensional quasilinear hyperbolic system of conservation laws. (Date of defence: August 20, 2021).

7. Subhankar Sil: Thesis Title: Symmetries, conservation laws and axact solutions of certain nonlinear partial differential equations. (Date of defence: May 2, 2022).

PhD students in progress:

1. Name of the Student: Mr. Rahul Barthwal
   Broad Research Area: Two-dimensional Riemann Problems for Hyperbolic System of Conservation Laws

2. Name of the Student: Mr. Balakrishna Chhatria
   Broad Research Area: Non-classical Waves and their Interactions in Nonstrictly Hyperbolic System of Conservation Laws

3. Name of the Student: Ms. Anamika
   Broad Research Area: Hyperbolic Partial Differential Equations

HONOURS/AWARDS/FELLOWSHIPS:

1. Recipient of Prof. Prabhulal Bhatnagar memorial prize, for the year 2007-2008, awarded by Indian Institute of Technology Bombay, for the most outstanding of all the Ph.D. students in Mathematics.
2. Senior Research Fellowship (SRF) in Department of Mathematics, IIT Bombay from July 2004 to September 2007.
3. Junior Research Fellowship (JRF) in Department of Mathematics, IIT Bombay from July 2002 to June 2004.
4. Qualified National Eligibility Test (Lectureship) conducted by Council of Scientific and Industrial Research.
5. Qualified Graduate Aptitude Test in Engineering (GATE) 2002 (All India Rank-90).
6. Secured 3rd rank in XXIX Mathematical Olympiad 2001 conducted, at PG level, by Andhra Pradesh Association of Mathematics Teachers.
7. Merit-Cum-Means Scholarship (July 2000-April 2002) for securing 9th rank in M.Sc entrance (national level) and good performance during M.Sc.
8. Secured 1st rank in B.Sc in the group Physics, Maths, Chemistry.
9. Certificate of Merit from Andhra Loyola College, Vijayawada.

M.Sc. DISSERTATION SUPERVISED:

13 Students from either IIT Kharagpur or NIT Rourkela.

WORKSHOP/ CONFERENCE PARTICIPATION IN ABROAD:

1. Visited **Institute of Applied Analysis and Numerical Simulation, University of Stuttgart, Stuttgart, Germany** during October 2-4, 2022.

2. Participated in the summer school **Horizons in Nonlinear PDEs** held at **Institute of Applied Analysis, Ulm University, Ulm, Germany** during September 26-30, 2022.

3. Participated and delivered a talk on "Interactions between delta shock waves and classical elementary waves in a nonstrictly hyperbolic system of conservation laws" in the **International Congress of Industrial and Applied Mathematics (ICIAM 2019)** held at **Valencia, Spain** during July 15-19, 2019

4. Participated and delivered a talk on "Stability of Riemann solution for a strictly hyperbolic system of conservation laws with flux approximation" in the **International Congress of Mathematicians (ICM 2018)** held at **Rio de Janeiro, Brazil** during August 1-9, 2018

5. Participated and delivered a talk on "Structural stability of Riemann solution for a strictly hyperbolic system of conservation laws" in the **International Conference on Mathematical Methods and Computational Techniques in Science and Engineering (MMCTSE 2018)** held at **University of Cambridge, UK**, during February 16-18, 2018.

6. Participated and delivered a talk on "Particular solutions to modified shallow water equations" in the **International Conference on Fluid Dynamics and Thermodynamics Technologies (FDTT 2012)** held at **Singapore** during March 17-18, 2012.

7. Participated in **CIM/UC Summer School** on Topics in Nonlinear PDEs held at **University of Coimbra, Portugal**, July 22-27, 2007.

8. Participated and given a poster presentation on "Riemann problem for a hyperbolic system of conservation laws in MHD" in the **6th International Congress on Industrial and Applied Mathematics (ICIAM 07)**, held at **Zurich, Switzerland**, July 16-20, 2007.

WORKSHOP/ CONFERENCE PARTICIPATION IN INDIA:

1. Participated and delivered a talk on "Riemann problem and interaction of weak shocks in isentropic drift-flux model of two-phase flows" in the **National Conference on Recent Advances in Mathematics and its Industrial Applications** held at **Acharya Nagarjuna University Campus, Ongole** during February 06-07, 2020.

2. Participated and chaired a session as a Treasurer in the **64th Congress of The Indian Society of Theoretical and Applied Mechanics** held at **IIT Bhubaneshwar** during December 09-12, 2019.

3. Participated and delivered a talk on "Riemann problem and interaction of weak shocks in isentropic drift-flux model of two-phase flows" in the **National Conference on Modern Mathematics & It's Applications** held at The American Collage, Madurai, during January 22-23, 2018.

4. Participated and delivered a talk on "Riemann problem and wave interactions in one dimensional blood flows" in the **83 rd Annual Conference of The Indian Mathematical Society** held at Sri Venkateswara University, Tirupati, during December 12-15, 2017.

5. Participated and delivered a talk on "Riemann solution for ideal isentropic magnetogasdynamics" in the **National Conference on Computational and Applied Mathematics in Science and Engineering** held at VNIT Nagpur during December 21-22, 2012.

6. Participated and delivered a talk on "Evolution of weak discontinuities in shallow water equations" in the **Heber International Conference on Applications of Mathematics and Statistics** held at Bishop Heber College, Tiruchirappalli during January 05-07, 2012.

7. Delivered a lecture on "Quasilinear Hyperbolic Partial Differential Equations" in the workshop **Analysis and Modeling of Dynamical Systems** organized at NIT Rourkela during December 5-7, 2011.

8. Participated in the **ATM Workshop on Lie Groups and Lie Algebras,** organized at the Harish-Chandra Research Institute, Allahabad during August 22-27, 2011.

9. Participated in the **National Conference on Vedas, The Source of all Sciences** held at Sastra University, Thanjavur during February17-19, 2011.

10. Participated in the **International Congress of Mathematicians, 2010** held at Hyderabad during 19-27 August 2010 and made a presentation titled "Solution to Magnetogasdynamics".

11. Participated in the International Congress of Mathematicians (ICM)-2010, Satellite-Conference on, "**INTEGRABLE SYSTEMS AND GEOMETRY**" during August 12-17, 2010 held at Department of Mathematics, Pondicherry University, Puducherry.

12. Participated and delivered the invited talk in the National Conference on Hyperbolic and Parabolic Partial Differential Equations, held at **Department of Mathematics, Indian Institute of Technology Bombay, India**, November 20 - 23, 2009.

13. Participated and given a contributed talk on "Riemann problem for MHD" in the International Conference on Computational Partial Differential Equations, held at **Department of Mathematics, Indian Institute of Technology Bombay, India**, December 10 - 13, 2008.

14. Participated in An International Workshop on Scientific Computation, Numerical Analysis and Applications at **Department of Mathematics, Indian Institute of Science**, July 4-15, 2005, Bangalore.

15. Participated in Instructional School on Computational Partial Differential Equations, **Department of Mathematics, Indian Institute of Technology Bombay, India**, June 05 - 24, 2005.

COURSES TAUGHT

Partial Differential Equations, Mathematics-I, Mathematics-II, Preparatory Mathematics, Linear Algebra, Advanced Mathematical Techniques, Similarity Transformations, Topology, Real Analysis, Functional Analysis

PROFESSIONAL MEMBERSHIP:

1. Life Membership for Indian Mathematical Society
2. Life Membership for Ramanujam Mathematical Society
3. Life Membership for The Indian Society of Theoretical and Applied Mechanics (ISTAM)

I hereby declare that all the statements above are true and complete to the best of my knowledge.

Place:

Date: **T. Raja Sekhar**