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Dr. M. SENTHILVELAN
CSIR EMERITUS SCIENTIST

Contact:

Address	:	Department of Nonlinear Dynamics Bharathidasan University Tiruchirappalli – 620 024 Tamilnadu, India
Date of Birth	:	08-07-1964
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Academic Qualifications: M.Sc., M.Phil., Ph.D.

Ph.D. : Bharathidasan University, Tiruchirappalli (1996)
Supervisor : Prof. M. Lakshmanan

Professional Experience: 20 Years

01 April 2026 - Present	CSIR Emeritus Scientist Department of Nonlinear Dynamics
01 August 2024 – 30 June 2025	Professor (Re-employment) Department of Nonlinear Dynamics
27 June 2019 – 31 July 2024	Professor and Head Department of Nonlinear Dynamics
9 July 2018 – 26 June 2019	Professor Department of Nonlinear Dynamics
9 July 2015 – 8 July 2018	Associate Professor Centre for Nonlinear Dynamics, Bharathidasan University
9 July 2005 – 8 July 2015	Lecturer/ Assistant Professor Centre for Nonlinear Dynamics, Bharathidasan University

Research Experience: 28 Years

26 Feb. 2003 – 8 July 2005	Senior Scientist Centre for Nonlinear Dynamics, Bharathidasan University
1 Dec. 2000 – 22 Feb. 2003	Post Doctoral Fellow School of Physics, The University of Sydney, NSW 2006, Australia
1 Nov. 1998 – 30 Oct. 2000	Post Doctoral Fellow Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil
1 Oct. 1997 – 30 Sep. 1998	Post Doctoral Fellow Dipartimento de Matematica e Informatica, Univesita de Catania, Italy
20 Sep. 1995 – 26 Sep. 1997	Research Associate Centre for Nonlinear Dynamics, Bharathidasan University

Additional Responsibilities

1. Member of the Technical Program Committee (TPC) for Physical Sciences (PHENNA - LOAMP) under the Advanced Research Grant (ARG) program of the Anusandhan National Research Foundation (ANRF) (2025-2028).
2. Director-Research, Bharathidasan University, Tiruchirappalli (2023-2024).
3. Member, UGC-CARE committee, Bharathidasan University, Tiruchirappalli (2021 – 2023).
4. In-charge of Post graduate degree semester examinations conducted by School of Physics, Bharathidasan University, Tiruchirappalli, during the year 2008 – 2014.

Areas of Research

- Dynamical Systems (Classical and Quantum), Mathematical Methods, Study of Nonlinear Dynamical Systems through Machine Learning.

Academic Interest

- Mathematical Physics, Statistical Mechanics, Classical Mechanics and Quantum Mechanics.

Membership in Professional Bodies

Editorial Board

1. Editorial board member in Pramana – Journal of Physics, Indian Academy of Sciences.

Referee

1. Refereed for Journals Nonlinear Dynamics, Proceedings of the Royal Society of London A, Journal of Physics A, Pramana-Journal of Physics, Physics letters A, Journal of Nonlinear Mathematical Physics, Physica Scritpa, Indian Journal of Physics, Modern

Physics Letters B, Nonlinear Dynamics, Communications in Nonlinear Sciences. Communications in Theoretical Physics, Pramana and Simulation.

Academic Bodies (Board of Studies)

1. Member of Board of Studies of Physical Science Programmes of the Centre for Distance and Online Education of Bharathidasan University.
2. Representative to the Academic Council, H. H. The Rajah's College (Autonomous), Pudukkottai (2022-2024).
3. Member of Governing Body, Nehru Memorial College (Autonomous), Puthanampatti (2022-2025).
4. Member of Academic Council, Jamal Mohammed College (Autonomous), Tiruchirappalli- 620020 (2022-2025).
5. Member of Board of Studies in Physics, Kongunadu Arts and Science College (Autonomous), Coimbatore– 641 029 (2022-2025).
6. Chairperson, Board of Studies in Physics (PG), Bharathidasan University, Tiruchirappalli – 620 024 (2021-2024).
7. Member of Board of Studies in Physics (UG), Bharathidasan University, Tiruchirappalli – 620 024 (2021-2024).
8. Member of Board of Studies in Physics, Srimad Andavan Arts and Science College (Autonomous), Trichy – 620 005 (2021-2024).
9. Member of Board of Studies in Physics, Government Arts College (Autonomous), Salem – 636 007 (2021-2024).
10. Member of Board of Studies in PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli (2020 - 2023).
11. Member of Board of Studies in Physics, J. J. College of Arts and Science (Autonomous), Pudukottai (2019-2021).
12. Member of Board of Studies in Physics, Nehru Memorial College (Autonomous), Puthanampatti (2017-2020).
13. Member of Board of Studies in Physics, Vellalar College for Women (Autonomous), Erode (2017-2020).
14. Member of Board of Studies in Physics (UG), Poompuhar College (Autonomous), Melaiyur, Nagapattinam (2016-2018).
15. Member of Board of Studies in Physics at Thevanai Ammal College for Women (2015-2018).

Research Supervision / Guidance

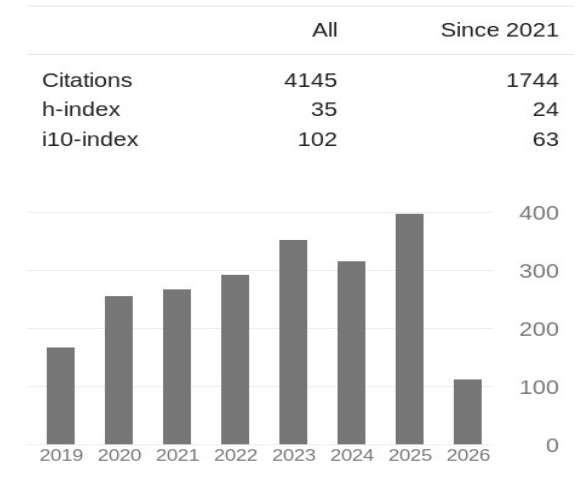
Program of Study		Completed	Ongoing
Research	Ph.D.	12	05
	M.Phil.	14	NIL
Project	PG	121	7

Ph.D. Guidance (completed)			
S.No	**Name**	**Title of thesis**	**Year of award**
1	Dr. V. Chithika Ruby	On certain continuous variable quantum states of a generalised isotonic oscillator and its position dependent mass counterparts	2014
2	Dr. N. Vishnu Priya	Breather and Rogue wave solutions of a coupled generalized nonlinear Schrödinger equation	2016
3	Dr. R. Mohanasubha	Interplay of symmetries and other integrability quantifiers in finite dimensional integrable nonlinear dynamical systems	2017
4	Dr. N. Ananth	Detection of Entanglement in bipartite states and non-k-separability in multipartite states	2017
5	Dr. K. Manikandan	Characterization of rogue waves and breather solutions of certain variable coefficients nonlinear Schrödinger equations	2017
6	Dr. K. Premalatha	A study on chimera patterns in Stuart-Landau oscillators under different coupling schemes	2018
7	Dr. S. Karthiga	On the Nonlinear Dynamics of Certain Mechanical and Optical PT Symmetric systems	2019
8	Dr. S. Stalin	On the dynamics of bright soliton in certain PT symmetric reverse space nonlocal nonlinear Schrödinger systems	2019
9	Dr. S. Sudharsan	A Study on the Emergence and Mitigation of Extreme Events in a Nonlinear Dynamical System and its Prediction using Machine Learning	2022
10	Dr. N. Sinthuja	Rogue wave solutions on the single- and double-periodic wave background and their modulational instability of certain higher-order nonlinear Schrödinger family of equations	2023
11	Ms. S. Monisha	Degenerate Solitons and Hybrid Solutions of Certain Higher Order Nonlinear Schrödinger Equations and their Predictions through Deep Learning Algorithm	2025
12	Mr. S. Thamizharasan	Collective Dynamical States in Adaptively Coupled Phase Oscillators with External Stimulus	2026

M.Phil. Guidance (completed)			
S. No.	**Name**	**Title of thesis**	**Year of award**
1	R. Gladwin Pradeep	On the integrability of Lotka-volterra system	2008
2	N. Ananth	On the entanglement conditions of certain bipartite states	2011
3	A. Bhuvaneswari	λ- Symmetries and time independent integrals of damped harmonic oscillator	2011
4	K. Manikandan	On the exact solutions of certain population models with Allee effect	2011
5	S. Selvakumar	On the Rogue wave solution of the Davey-Stewartson equation	2012
6	M. I. Sabiya Shakila	On the breathers and rogue wave solutions of a higher-order dispersive nonlinear Schrodinger equation	2013
7	G. Mullai Malar	On the periodic wave solutions of certain nonlinear partial differential equations using Riemann theta functions	2013
8	A. N. Vigneswaran	On the exact quantum solvability of quadratic Lienard type oscillators	2014
9	M. Sindhuja	Lie point symmetries of a class of Lienard type nonlinear oscillators	2015
10	Arun Raj	An overview on methods of finding conservation laws of partial differential equations	2016
11	R. Vedhanayagi	On the shape invariance properties of a nonlinear oscillator	2018
12	A. Gayathri	Exact generalized separable solutions to certain nonlinear delay reaction-diffusion equations	2019
13	P. Madhumathi	Zeros of time-dependent monic polynomials and solvable nonlinear dynamical systems	2019
14	R. Abirami	Schrödinger's Cat: Introduction And Realizations	2021

Publications

International		National		Others
Journals	**Conferences**	**Journals**	**Conferences**	**Chapters**
168	**10**	**Nil**	**07**	**2**



Cumulative Impact Factor (as per JCR)	:	**~ 239.316**
h-index	:	**35**
Total Citations	:	**4145**

Funded Research Projects

List of Ongoing Projects

S. No	Agency	Period		Project Title
		From	To	
1.	CSIR-Emeritus Scientist	2026	2029	Tailoring Non-Hermitian Topological Insulator for Applications and Search for Topological States through Machine Learning
2.	CSIR	2023	2026	Dynamics of Extreme Epileptic Events in Network of Neurons and its Model-free Prediction through Machine Learning

List of Completed Projects

S. No	Agency	Period		Project Title
		From	To	
1.	DST-SERB	2022	2025	Synchronization in self-sustained oscillators with cross-Kerr and parametric perturbation and its model free predictions using Deep Learning
2.	NBHM	2018	2022	Nonstandard Bilinearization and PT-invariant Localized Solution of Certain PT-invariant Nonlocal Nonlinear Schrödinger Equation
3.	CSIR	2017	2021	Collective Dynamical states of coupled Nonlinear Oscillators
4.	DST-SERB	2017	2020	Exploring the dynamics, control mechanisms and novel structures in certain PT symmetric systems
5.	DST-SERB	2013	2016	Classical and quantum dynamics of certain PT symmetric (reversible) Lienard type nonlinear oscillator
6.	NBHM	2013	2016	Multi-Rogue wave solutions of certain coupled nonlinear Schrödinger equations.
7.	UGC	2010	2013	On the dynamics of certain two component Generalization of Camassa - Holm and Degasperis – Processi equations
8.	DST	2009	2012	Applied Nonlinear Physics: Indo-Brazil Joint Research Project
9.	DST	2008	2011	On the invariance, linearization and integrability of certain nonlinear dynamical systems
10.	NBHM	2007	2011	A New approach to integrability of a class of nonlinear ordinary and partial differential equations

Distinctive Achievements / Awards

1. Awarded as Emeritus Scientist by Council of Scientific and Industrial Research, Government of India for the year 2025-2028.
2. Fellow of the Academy of Sciences, Chennai (2019).
3. Awarded TWAS-UNESCO Associateship at Centre of Excellence in the South awarded by ICTP, Italy for the year 2007-2010.
4. Awarded Postdoctoral research fellowship for the year 2000-'03 by the University of Sydney, Sydney, Australia.
5. Awarded Fundacao de Amparoa Pesquisa do Estado de Sao Paulo (FAPESP, Brazil) Postdoctoral research fellowship for the year 1998 – '2000.
6. Awarded Consiglio Nazionale delle Ricerche (National Research), Italy, Postdoctoral research fellowship for the year 1997 – '98.
7. Awarded Senior Research Fellowship by Council of Scientific and Industrial Research, Government of India for the year 1992 – '95.
8. Qualified in Graduate Aptitude Test in Engineering (GATE) in the year 1989 with an overall percentile score of 84.73 conducted by Ministry of Human Resources, Government of India.

Events involved/organized

1. Organized Fifteenth Conference on Nonlinear Systems and Dynamics (CNSD-2025) held at School of Physics, Bharathidasan University, Tiruchirappalli, during 10-13 March 2025 (with Prof. P. Muruganandam, Bharathidasan University).
2. Organized SERB-SSR sponsored National level workshop on "MACHINE LEARNING IN PHYSICS: INNOVATIONS AND APPLICATIONS" at Department of Nonlinear Dynamics, School of Physics, Bharathidasan University, Tiruchirappalli, during 12-13 December 2024.
3. Co-ordinator for the UGC sponsored Online Leadership Developement Programme for Middle and Senior level Teachers, organized by HRDC Bharathidasan University, Tiruchirappalli, during 11 – 17 March 2022.
4. Co-ordinator for the UGC sponsored Refresher Course in Physics conducted by UGC-Academic Staff College, organized by Bharathidasan University, Tiruchirappalli, during 23 October to 05 November 2019.
5. Co-ordinator for the UGC sponsored Refresher Course in Physics conducted by UGC-Academic Staff College, Bharathidasan University, Tiruchirappalli, during 6 – 26 November, 2014.
6. Co-coordinator for the UGC sponsored Refresher Course in Physics conducted by UGC-Academic Staff College, Bharathidasan University, Tiruchirappalli, from 20-11-2012 to 10-12-2012 (with Prof. S. Dhanuskodi, Bharathidasan University).
7. Organized Sixth National Conference on Nonlinear Systems and Dynamics (NCNSD-2011) held at School of Physics, Bharathidasan University, Tiruchirappalli, during 27-30 January 2011 (with Prof. M. Daniel, Bharathidasan University).
8. Organized DST-SERC School on "Nonlinear Dynamics" held at School of Physics, Bharathidasan University, Tiruchirappalli, during 04-26 January 2011 (with Prof. M. Lakshmanan and Prof. M. Daniel, Bharathidasan University).

9. Organized National Level TPSC Workshop on, “Nonlinear Physics: Theory, Experiments and Applications” at Nehru Memorial College, Puthanampatti, Tiruchirapalli District, during 29-31, March 2010 (with Dr. A. Venkatesan, Nehru Memorial College, Puthanampatti).
10. Organized Seminar, “Frontier Topics in Fundamental Physics”, at Centre for Nonlinear Dynamics, School of Physics, Bharathidasan University, Tiruchirapalli, during 30-31, March, 2009 (with Prof. S. Rajasekar, School of Physics, Bharathidasan University).
11. Coordinator for the UGC sponsored Refresher Course in Physics conducted by UGC-Academic Staff College, Bharathidasan University, Tiruchirapalli, from 04-03-2008 to 24-03-2008.
12. Organized seminar on Recent Developments in Physics during 21-22, Nov. 2005 at Bharathidasan University, Tiruchirappalli (With Prof. S. Rajasekar, School of Physics, Bharathidasan University).

Overseas Exposure / Visits

1. Visited Departamento Matematica Aplicada, Universidad Rey Juan Carlos, Madrid, Spain, during November 5 – 11, 2012
2. Visited Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil, during 1 June 2012 – 1 July 2012
3. Visited Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil, during 10 August 2011 – 10 September 2011
4. Visited Departamento de Matematicas, Universidad de Cadiz , 11510 Puerto Real, Cadiz, Spain, during Feb. 15 - March 2, 2011
5. Visited Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil, during 3 July 2010 – 5 September 2010
6. Visited Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil, during 4 June 2009 – 31 August 2009
7. Visited Departamento Matematica Aplicada, Universidad Rey Juan Carlos, Madrid, Spain, during Nov. 4-15, 2008
8. Visited Dipartmento di Mathematica e Informatica, Universita de Catania, Catania, Italy, during Nov. 16-23, 2008
9. Visited Instituto de Fisica Teorica, Universidad Estadual Paulista, Sao Paulo, Brazil,, during 23 October 2007 – 18 January 2008
10. Visited Institute of Mathematics, Statistics & Actuarial Science, University of Kent, Canterbury, UK during 3 Jan. - March 3, 2007 (under India-UK Science Networks Scheme jointly supported by Department of Science and Technology, India and Royal Society, UK)
11. Visited Dipartmento di Mathematica e Informatica, Universita de Catania, Catania, Italy, during Dec. 4-15, 2005
12. Visited Department of Mathematics and Statistics, University of Surrey, Guilford, U.K, during July 26 – July 31, 2004.
13. Visited Dipartmento di Mathematica e Informatica, Universita de Catania, Catania, Italy, during June 16 – July 2, 2003.
14. Visited Departmento de Fisica Teorica, Universidad de Salamanca. Salamanca, Spain, during June 2 – 7, 2003.
15. Visited Departmento de Fisica Teorica, Universidad de Zaragoza, Zaragoza, Spain, during June 9 – 14, 2003.

16. Visited Department of Mathematics, University of British Columbia, Vancouver, Canada, during Feb 1 – April 30, 2000.

Seminars Presented

1. Presented a seminar entitled an invited talk on "A Historical Perspective on Quantum Entanglement and its Experimental Verification", organized by the Department of Physics, Bharathiar University, Coimbatore, 04 August 2023.
2. Presented a seminar entitled an invited talk on "An Informal Introduction to Artificial Neural Networks" organized by the Department of Physics, Vellore Institute of Technology, Vellore, 28 July 2023.
3. Delivered a lecture entitled "Classical and Quantum Studies of a Position Dependent Mass Nonlinear Oscillator", at Department of Physics, Panjab University, Chandigarh (December 7, 2018).
4. Invited Lectures given in Mini Winter School on Ultracold Atoms (UCAT-2014) held at Department of Physics, Government College for Women, Kumbakonam, Tamil Nadu (during 22 – 24, December 2014).
5. Presented a seminar at Departamento de Fisica Teorica II, Facultad de Ciencias Fisicas, Universidad Complutense, Madrid, Spain (November 7, 2012) entitled "On the non-standard conservative Hamiltonian description of certain damped nonlinear oscillators"
6. Presented a seminar at Instituto de Matematica, Estatistica e Computacao Cientifica, Universidade Estadual de Campinas, Campinas, Brazil (June 26, 2012).
7. Presented a seminar at Instituto de Fisica, Universidade Estadual Paulista, Guaratingueta, Brazil (June 22, 2012)
8. Invited talk given at the International Scientific Seminar "Generalized Hamiltonian structure of differential equations and dissipative dynamical systems" held at School of Mathematics, University of Kent, UK, during 27-29, June 2011.
9. Presented a seminar at Department of Applied Mathematics, University of Leeds, Leeds, UK, Feb., 2007
10. Presented a seminar at Institute of Mathematics, Statistics and Acturial Science, University of Kent, Canterbury, UK, Feb., 2007
11. Presented a seminar at Dipartmento di Mathematica e Informatica, Universita de Catania, Catania, Italy, Dec. 2005
12. Presented a seminar at Departmento de Fisica Teorica, Universidad de Salamanca. Salamanca, Spain, June, 2003
13. Presented a seminar at Departmento de Fisica Teorica, Universidad de Zaragoza, Zaragoza, Spain, June, 2003

Participated in Conferences/ Seminars/ Workshops

1. Participated in the International Conference on Applied AI and Scientific Machine Learning held at IISc Bengaluru on 14-18, December 2024.

2. Participated and delivered a talk in the 7th International Conference on Complex Dynamical Systems and Applications (CDSA-2024) held at Digha Science Centre & National Science Camp, Digha, January 25-27, 2024.
3. Participated and delivered a talk in the Conference on Complexity and Nonlinear Dynamics in Science, Engineering, Technology and Mathematics (CNLDS-2023) held at IIT, Hyderabad, June 5-7, 2023.
4. Participated and presented a talk in XLVI Indian Social Science Congress held at Bharathidasan University, Tiruchirappalli, 27-31 January 2023.
5. Participated and delivered a talk in the Conference on Nonlinear Systems and Dynamics (CNSD 2022) held at IISER Pune, 15-18 December 2022.
6. Delivered a series of lectures in the "Two-day Lecture Workshop on Mathematical Physics and Statistical mechanics" jointly organized by the Department of Physics and Mathematics, Sri S. Ramasamy naidu memorial College, Sattur, during 15-16 September 2022.
7. Participated and delivered a talk in the International Conference on Mathematical Sciences and Applications held at Department of Mathematics, University of Kalyani, 28-29 June 2022.
8. Participated in "Bangalore School on Statistical Physics-XII (Online)" organized by ICTS, Bangalore, during 28 June -09 July 2021.
9. Participated in "Non-Hermitian Physics (Online)" organized by ICTS, Bangalore, during 22 -26 March 2021.
10. Participated in the International Conference on Complex Quantum Systems held at Bhabha Atomic Research Centre, Mumbai, 04-06 March 2020.
11. Participated and delivered a talk in the Conference on Nonlinear Systems and Dynamics (CNSD 19) held at IIT Kanpur, 12-15 December 2019.
12. Participated and delivered a talk in the National Conference on Differential Equations and Dynamical Systems held at Department of Mathematics, NIT Karaikal, 5-6 April, 2019.
13. Participated in the three day workshop "Quantum Statistics – Theory & Experiment" organized by the Department of Physics, St. Philomena's College, Mysuru, during 15-17, Feb. 2019.
14. Participated and delivered a talk in the Conference on Nonlinear Systems and Dynamics (CNSD 18) held at JNU, New Delhi 11-14 October 2018.
15. Participated and presented a talk at National Conference on Dynamical Systems and Chaos held at Government Arts College, Coimbatore, Tamilnadu during September, 11-13, 2017.
16. Participated in "Bangalore School on Statistical Physics-VII" held in ICTS Campus, Bangalore, during 1-15 July 2016.
17. Participated and presented a talk at National conference on Computational Mathematics and Nonlinear Dynamics (CMND-2016) held at Department of Mathematics, Visva-Bharathi, Santiniketan – 731 235 during 19-21 February 2016.
18. Participated and presented a talk at 4th International conference on Complex Dynamical Systems and Applications (CDSA 2016) held at Department of Mathematics, National Institute of Technology, Durgapur, during 15-17 February 2016.
19. Participated and presented a talk in Conference on Nonlinear Systems and Dynamics (CNSD 15) held at IISER, Mohali, 13-15 March 2015.
20. Participated in Bangalore School on Statistical Physics held during 31 March – 12 April, 2014 held at the Raman Research Institute, Bangalore.
21. Nonlinear Integrable Systems and Their Applications, Centre for Nonlinear Dynamics, School of Physics, Bharathidasan University, Tiruchirappalli, 24 Feb.-1 March 2014.

22. Quantum Integrable Systems, S.N.Bose National Centre for Basic Sciences, Kolkata, Dec.2-6, 2013.
23. National Conference on Nonlinear Physics and its Applications, Darjeeling Government College, Darjeeling, West Bengal, Nov.26-28, 2013.
24. Participated at Perspectives in Nonlinear Dynamics (PNLD)-2013, University of Hyderabad, July15-18th, 2013.
25. Participated at National Conference on Frontiers in Analysis and Differential Equations held at School of Mathematics, Bharathidasan University, Tiruchirappalli during Dec.19-20, 2012.
26. Participated at Fifth National level Conference on "Nonlinear Systems and Dynamics (NCNSD) 2009" held at Saha Institute of Nuclear Physics, Kolkata, India, during, March 5 – 7, 2009
27. Participated at International Conference on "*Geometry of Integrable System*" held in Hanoi, Vietnam, during April 9 – 13, 2007.
28. Participated at Third National level Conference on "Nonlinear Systems and Dynamics (NCNSD) 2006" held at Ramanujan Institute for Advanced Study in Mathematics, University of Madras, Chennai, India, during, February 6 – 8, 2006
29. Participated at International Conference on "*Mathematical Ideas in Nonlinear Optics: Guided Wave in Inhomogeneous Media*" held in Edinburgh, United Kingdom, during July 18 – 24, 2004.
30. Participated at First National level Conference on "Nonlinear Systems and Dynamics 2003" held at Indian Institute of Technology, Kharagpur, India, during, December 28 – 30, 2003.
31. Participated at International Conference on "*Nonlinear Physics: Theory and Experiment –III*" held in Gallipoli, Lecce, Italy, during June 22 – July 3, 2004.
32. Participated at International Conference on "Nonlinear Phenomena" held at Indian Institute of Science, Bangalore, India, during January 5 – 10, 2004.
33. Participated at International Conference on "Symmetry in Nonlinear Mathematical Physics" held in Kiev, Ukraine, during July 3 – 8, 1995.

Poster Presentations

1. "School and Conference on Quantum Information (ISCQI-2011)" held at Institute of Physics, Bhubaneswar, India, during December 13-22, 2011
2. "Non-Hermitian Hamiltonian in Quantum Physics" held at BARC, Mumbai, during January 12-16, 2009
3. "Perspectives in Nonlinear Dynamics" held at Indian Institute of Technology, Chennai, India, during July 12-15, 2004.
4. Australian Conference on "Optics, Lasers and Spectroscopy 2001" held at the University of Brisbane, Brisbane, Australia, during December 3-6, 2001
5. "Symmetries and Integrability of Difference Equations – III (SIDE III)" held at Sabudia, Italy, during May 1998.

Faculty Development Programme

1. Acted as a Resource person for the Faculty Development Programme on "UNDERSTANDING THE EXPECTATIONS OF JOURNALS, REVIEWERS AND EDITORS" organized by the UGC -

Malaviya Mission Teacher Training Centre (UGC - MMTTC), Bharathidasan University, Tiruchirappalli (20-02-2026 & 21-02-2026).

2. Acted as a Resource person for the Faculty development programme (FDP) on "Quantum Computing and AI" organized by the Vellore Institute of Technology, Vellore (27-01-2026 & 28-01-2026).
3. Acted as a Resource person for the Faculty development programme (FDP) on "Quantum Mechanics and Computation: Building the Bridge to the Quantum Era" organized by the Vellore Institute of Technology, Vellore (08-05-2025 & 09-05-2025).
4. Acted as a Resource person for the Faculty Development Programme on "Refresher Course in Physical Science (Interdisciplinary)" organized by the UGC - Malaviya Mission Teacher Training Centre (UGC - MMTTC), Bharathidasan University, Tiruchirappalli (27-11-2024 & 29-11-2024).
5. Acted as a Resource person for the online Faculty Development Programme on "Spectra of Physics - II" organized by the Physics Department of PSGR Krishnammal College for Women, Coimbatore (26-09-2022 to 27-09-2022).
6. Delivered Lectures on "Vector Calculus" in the Faculty Development Programme organized by the Department of Mathematics, School of Advanced Sciences, VIT University, Vellore (10-09-2022).
7. Delivered a Lecture on "Ensemble approach in Statistical Mechanics" in the Faculty Development Programme organized by the Physics Department of PSGR Krishnammal College for Women, Coimbatore (03-03-2022 & 04-03-2022).
8. Delivered a Lecture on "Learning Quantum Mechanics through Experiments" in the Faculty Development Programme organized by the Physics Department of PSGR Krishnammal College for Women, Coimbatore (01-03-2022 & 02-03-2022).
9. Delivered a Lecture on "Research Funding Schemes & Project Proposal Preparation" to the participants of the Fourth Faculty Induction Programme conducted by the UGC Human Resource Centre, Bharathidasan University, Tiruchirappalli (23-01-2021).
10. Acted as a Resource person of the Faculty Development Programme on "Differential Equations and its Applications" funded under DBT Star College Scheme and organized by the Department of Physics, V. V. Vanniaperumal College for Women, Virudhunagar (14-12-2020 to 16-12-2020).
11. Delivered a Lecture on "Curvilinear Coordinates and their Applications" at the webinar "Faculty Development Progamme on Mathematics and Its Applications in Science and Technology" Organized by Department of Mathematics, School of Basic Sciences, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur (15-07-2020).
12. Acted as a Resource person for the online Faculty Development Programme on "Statistical Mechanics" organized by the Physics Department of PSGR Krishnammal College for Women, Coimbatore (25-05-2020 to 30-05-2020).
13. Served as a Resource Person for the Faculty Development Programme on Mathematical Physics organized by the Physics Department of PSGR Krishnammal College for Women, Coimbatore (22 & 23 -11-2018).

14. Served as a Resource Person in the Faculty Enrichment Programme organized by the Internal Quality Assurance Cell, Bishop Heber College, Trichy on 19-11-2018.
15. Delivered a lecture in the Faculty Training Programme – Physics for college faculty members orgainized by Periyar University at Bharathiyar Arts & Science College for Women, Deviyakurichi (15-11-2018).
16. Delivered a lecture on the topic Funding Schemes and Research Proposal Preparations in the 99th Orientation Programme Conducted by the UGC – Human Resource Development Centre, Bharathidasan University,Tiruchirappalli, on 2-12-2017.
17. Acted as a Resource Person for the Faculty Development Programme – NET Training organized by the Internal Quality Assurance Cell at Cauvery College for Women, Tiruchirappalli, during October 5-6, 2017.
18. Delivered a lecture in the Orientation Programme Conducted by the UGC – Human Resource Development Centre, Bharathidasan University,Tiruchirappalli, on 9-9-2017.
19. Acted as a Resource Person for the Faculty Development Programme – NET Training organized by the Internal Quality Assurance Cell at Cauvery College for Women, Tiruchirappalli, during August 18-19, 2017.
20. Acted as a Resource person for UGC sponsored Guest Lecture Programme on Vector Calculus from Physicists' Perspective organized by the Department of Physics, Vellalar College for Women, Erode (20.09.2016).

Refresher Courses

1. Delivered a Lecture on "Deep Learning from a beginner's perspective" to the participants of the Refresher Course in Physics organized by the UGC Human Resource Development Centre, Bharathiyar University, Coimbatore (12-12-2023).
2. Delivered a Lecture on "A Bird's view on Statistical Mechanics" to the participants of the Refresher Course in Physics organized by the UGC Human Resource Development Centre, Bharathiyar University, Coimbatore (13-12-2023).
3. Acted as a Resource Person and delivered an Lecture on " Mathematical Physics and Statistical Mechanics" for the UGC-HRDC Refresher Course in Physics organized by the Department of Materials Science, University of Madras, Chennai (02.12.2023)
4. Acted as a Resource Person for the UGC-Sponsored Online Refresher Course in Mathematics on the topic "Machine Learning", conducted by the UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli (08-11-2023).
5. Acted as a Resource Person for the UGC-Sponsored Online Refresher Course in Mathematics on the topic "Curvliniear Coordinates", conducted by the UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli (07-11-2023).
6. Delivered an Online Lecture on "(i) An Overview on Ensembles and (ii) A Historical Perspective on Quantum Entanglement" to the participants of the Refresher Course in Physics organized by the UGC Human Resource Development Centre, Bharathidasan University, Tiruchirappalli (31-07-2023).

7. Delivered an Online Lecture on “An Introduction to Machine Learning” to the participants of the Refresher Course in Physics organized by the UGC Human Resource Development Centre, Bharathidasan University, Tiruchirappalli (27-07-2023).
8. Delivered a Lecture on “ A Teaching Module on Curvilinear Coordinates for Physics Students” to the participants of the Refresher Course in Physics conducted through online mode by the Department of Nuclear Physics, University of Madras, Chennai (21-09-2022).
9. Delivered a Lecture on “An informal Introduction to Vector Calculus” to the participants of the Refresher Course in Physics conducted through online mode by the HRDC, Pondicherry University, Puducherry (10-07-2021).
10. Delivered a Lecture on “Curvilinear Coordinates and their applications” to the participants of the Refresher Course in Mathematics & Statistics conducted by the UGC Human Resource Centre, Bharathidasan University, Tiruchirappalli (07-12-2020).
11. Delivered a Lecture on “Funding Scheme for Research & Research Proposal Preparation” to the participants of the Refresher Course in Research Methodology organized by the UGC Human Resource Centre, Bharathidasan University, Tiruchirappalli (01-02-2020).
12. Delivered a Lecture on “On the foundations of Statistical Mechanics” and “Understanding Vector Calculus” to the participants of the Refresher Course in Physics organized by the UGC Human Resource Centre, Bharathiar University, Coimbatore (22-01-2020 and 23-01-2020).
13. Delivered a Lecture on “Introduction to Ensembles” to the participants of the Refresher Course in Physics organized by the UGC Human Resource Centre, Bharathidasan University, Tiruchirappalli (23-10-2019).
14. Delivered a Lecture on Statistical Physics 1 & 2 to the participants of the Refresher Course in Physics organized by the UGC Human Resource Centre, Bharathiar University, Coimbatore (24-11-2018).
15. Delivered a Lecture on “Mathematical Physics 1 & 2” to the participants of the Refresher Course in Physics organized by the UGC Human Resource Centre, Bharathiar University, Coimbatore (23-11-2018).
16. Delivered a lecture on the topic Publication Phisihing in the Refresher Course on Nano Sciences Conducted by the UGC – Human Resource Development Centre, Bharathidasan University,Tiruchirappalli, on 31-12-2017.
17. Delivered an invited lecture entitled “Introduction to Vector Calculus” on 31.03.2016 under UGC-DSA Lecture Series Program held at the School of Physics, Madurai Kamaraj University.
18. Delivered an invited talk in the UGC sponsored “Refresher Course in Physics for the College & University Teachers during the period 17 February 2016 – 08 March 2016”.

Invited Talks in Student Training Programme

1. Delivered a Special Lecture on “Artificial Neural Networks and Mathematics behind Deep Learning methods” in Department of Physics, National Institute of Technology, Tiruchirappalli (10-03-2026).
2. Acted as a Resource Person and delivered a talk on “Entanglement: Some Glimpses” organized by the Department of Physics, PSGR Krishnammal College for Women, Coimbatore (27 February 2026).

3. Acted as a Resource Person and delivered a talk on “Artificial Neural Networks and Mathematics behind Deep Learning Methods” organized by the Department of Physics, Bharathiar University, Coimbatore (26 February 2026).
4. Acted as a resource person for the “NET/SET Coaching programme” organized by the Department of Physics, Bharathiar University, Coimbatore (20 December 2025).
5. Delivered an invited lecture on “Machine Learning: an informal Introduction” organized by the Department of Physics, Vellore Institute of Technology, Vellore (2 December 2025).
6. Acted as a resource person for the “Skill Enhancement workshop on Problem-solving Strategies in Physics” organized by PG & Research Department of Physics, Bishop Heber College, Tiruchirappalli (24-30 November 2025).
7. Delivered an invited lecture in Dr. R. Pothiraj Memorial Annual Lecture -III organized by the Department of Physics, Sri S. Ramasamy Naidu Memorial College, Sattur (26 September 2025).
8. Delivered an invited lecture on “Introduction to Machine Learning” organized by the Department of Physics, Sri S. Ramasamy Naidu Memorial College, Sattur (24 March 2025).
9. Delivered an invited lecture in “ACT NEXT 2024” organized by Department of Physics, Alagappa University, Karaikudi (27 January 2025).
10. Delivered an invited lecture on “Recent developments in Physics” organized by the Department of Physics, Sri S. Ramasamy Naidu Memorial College, Sattur (24 December 2024).
11. Acted as a resource person for the “CSIR/JEST/GATE/SET Coaching programme” organized by Seethalakshmi Ramaswami College, Tiruchirappalli (04 December 2024).
12. Acted as a resource person for the “NET/SET Coaching programme” organized by the Department of Physics, Periyar University, Salem (19 & 20 August 2024).
13. Acted as a resource person for the “Bridge Course on Mathematical Physics” for Undergraduate and Postgraduate students organized by the Department of Physics, Lady Doak College, Madurai (19 & 22 July 2024).
14. Acted as a resource person for the “Bridge Course on Mathematical Physics” for Undergraduate students organized by the Department of Physics, Lady Doak College, Madurai (21-08-2023).
15. Acted as a resource person for the “Bridge Course on Mathematical Physics” for Post graduate students organized by the Department of Physics, Lady Doak College, Madurai (21-08-2023).
16. Delivered an invited lecture in Summer Training Program in Physics (Online) (STPIP-2023) on “Vector Calculus - III” organized by Department of Material Science, University of Madras, Chennai (4^{th} July, 2023).
17. Delivered a couple of lectures in Summer Training Program in Physics (Online) (STPIP-2023) on “Vector Calculus – I & II” organized by Department of Material Science, University of Madras, Chennai (20^{th} & 22^{nd} June, 2023).
18. Delivered two lectures in Summer Training Program in Physics (Online) (STPIP-2023) organized by Department of Physics and Centre for Nanoscience and Technology, Anna University, Chennai (12^{th} June to 13^{th} June, 2023).
19. Delivered an invited five lectures in Summer Training Program in Physics (Online) (STPIP-2023) on “Statistical Mechanics and Machine Learning” organized jointly by Academy of Sciences, Chennai & Bharathiar University, Coimbatore (2^{nd} June to 17^{th} June, 2023).

20. Delivered an invited talk on “Nobel Prize in Physics (2022)” organized by the Department of Physics, Vellore Institute of Technology, Vellore (24-05-2023).
21. Delivered an invited talk on “Nobel Prize in Physics (2022)” organized by the Department of Physics, Bharathidasan University, Tiruchirapppalli (17-03-2023).
22. Delivered an invited talk on “Nobel Prize in Physics (2022)” & Stern and Gerlach Experiment – A Recap” organized by the Department of Physics, Shri S. Ramasamy Naidu Memorial College, Sattur (14-03-2023).
23. Delivered an invited talk on “Nobel Prize in Physics 2022” organized by the Department of Physics, The American College, Madurai (09-03-2023).
24. Acted as a Resource Person and delivered a talk in “One Day Seminar on Complex Analysis” organized by the Department of Physics, Bon Secours College for Women, Thanjavur (03-03-2023).
25. Acted as a Resource Person and delivered a talk on “Nobel Prize in Physics” at Department of Physics, Nehru Memorial College, Puthanampatii (28-02-2023).
26. Delivered a talk on “Special Functions” in the Department of Physics, A. V. V. M Sri Pushpam College (Autonomous), Poondi (09-02-2023).
27. Acted as a Resource person for the “Bridge Course in Statistical Mechanics” organized by the Department of Physics, Lady Doak College, Madurai (24-01-2023).
28. Delivered an invited lecture in “Nobel Day Celebrations–2022” held at Department of Environmental Science and Management, Bharathidasan University, Tiruchirappalli (11.01.2023).
29. Delivered an invited lecture in “Nobel Day Celebrations–2022” held at CSIR-Central Electrochemical Research Institute, Karaikudi (12-12-2022).
30. Delivered an invited lecture in “Dynamics Days Delhi – XVI” held at Bennett University, Greater Noida (19-11-2022).
31. Delivered an invited lecture entitled “Informal introduction to artificial neural network” held at the School of Physics, Madurai Kamaraj University (19-10-2022).
32. Delivered an invited talk in the One Day National Level Workshop on “Perceiving Calculus via Digital Mode”, Vellore Institute of Technology, Vellore (29-09-2022).
33. Acted as a Resource person for the “Bridge Course On Mathematical Physics” organized by the Department of Physics, Lady Doak College, Madurai (29-08-2022).
34. Delivered a Special Lecture on “Graphs and their importance in Physics” at J.J.College of Arts and Science (Autonomous), Pudukottai (08-08-2022).
35. Delivered an invited lecture in Summer Training Program in Physics (Online) (STPIP 2022) on “Application to Curvilinear Coordinates in Physics” organized jointly by Academy of Sciences, Chennai & Bharathiar University, Coimbatore (26-07-2022).
36. Acted as a Resource person for the Virtual Skill Development Program on “Problem solving in Mathematics” organized by the Department of Physics, Lady Doak College, Madurai (27-01-2022 & 28-01-2022).

37. Acted as a Resource person for the "Bridge Course On Statistical Mechanics" organized by the Department of Physics, Lady Doak College, Madurai (13-12-2021 & 15-12-2021).
38. Acted as a Resource person for the webinar "Understanding Quantum Mechanics Through Experiments" organized by Department of Physics, Kongunadu Arts and Science College, Coimbatore (30-11-2021).
39. Delivered an invited lecture in Summer Training Program in Physics (Online) (STPIT2021)-Section-I & II on "An Introduction to Vector Fields" organized jointly by Academy of Sciences, Chennai, Centre for Nanoscience and Technology, Anna University & Bharathiar University, Coimbatore (24-07-2021).
40. Delivered an invited lecture in Summer Training Program in Physics (Online) (STPIT2021)-Section-II on "Wrong Theory – Right Experiment: A Gateway to Quantum Mechanics" organized Bharathiar University, Coimbatore (24-07-2021).
41. Delivered an invited lecture in Summer Training Program in Physics (Online) (STPIT2021)-Section-I & II on "An Introduction to Curvilinear Coordinates" organized jointly by Academy of Sciences, Chennai, Centre for Nanoscience and Technology, Anna University & Bharathiar University, Coimbatore (23-07-2021).
42. Delivered an invited lecture on "Learning Quantum Mechanics through Experiments" organized by School of Advanced Sciences, Department of Physics, Vellore Institute of Technology, Vellore (24-03-2021).
43. Delivered a talk on "The Contributions of Vikram Sarabhai for Nation Building" organized by Holy Cross College (Autonomous), Tiruchirappalli (22-03-2021).
44. Delivered a couple of lectures on "Lecture Workshop on Vector Calculus and Quantum Mechanics" through online mode organized by the Department of Physics, Vellalar College for Women (Autonomous), Erode (19-03-2021 to 20-03-2021).
45. Delivered a Lecture on "Vector Calculus and its application in Physics" through online zoom meet at Vivekanandha College of Arts and Sciences for Women (10-02-2021).
46. Delivered a series of lecture on "Learning of Quantum Mechanics thorugh Experiments" organized by Department of Physics Sri. S. Ramasamy Naidu Memorial College, Sattur, Virudhinagar (08-02-2021 to 12-02-2021).
47. Acted as a Resource person for the Webinar "Introduction to Ensembles" organized by Department of Physics and Research Centre, Women's Christian College, Nagercoil (25-08-2020).
48. Delivered an invited talk on "Cylindrical Polar Coordinates and Differential Equations" organized by Department of Physics, Tagore Government Arts and Science College, Puducherry (18-08-2020).
49. Delivered an invited talk at "Summer Training Program in Physics – 2020 [Online]" organized b The Academy of Sciences, Chennai and the Department of Nanoscience and Technology, Bharathiar University, Coimbatore (21-07-2020).
50. Delivered Two Lectures on "Mathematical Physics" through online mode to M. Sc., Physics student participants at Summer Training Programme In Physics (STPIP 2020) organised by The Academy of Sciences, Chennai and Department of Nuclear Physics, University of Madras, Guindy Campus, Chennai (16-07-2020).

51. Acted as a Resource person for the Webinar conducted by Department of Physics, Arumugam Pillai Seethai Ammal College, Tiruppattur (27-06-2020).
52. Delivered a Lecture through a webinar series on 'Statistical Physics' at Department of Physics, PSGR Krishnamal College for Women (Autonomous), Coimbatore (01-06-2020 to 10-06-2020).
53. Delivered a guest lecture on "Contribution of Vikram Sarabhai for the Nation building" at Department of Physics, PSGR Krishnamal College for Women (Autonomous), Coimbatore (12-01-2020).
54. Delivered a guest lecture on "Applications of Mathematics in Physics" at Department of Physics, A.V.C College (Autonomous), Mayiladuthurai (18-12-2019 and 19-12-2019).
55. Delivered a special lecture on "Vector Analysis" at Department of Physics, Government Arts College (Autonomous), Kumbakonam (27-09-2019).
56. Served as a Resource Person for DBT – STAR College Scheme funded, Guest Lecture Programme on Vector Calculus organized by the Department of Physics, Vellalar College for Women (Autonomous), Erode (24-09-2019).
57. Delivered a set of lectures to Post Graduate students participated in the CSIR-NET coaching classes organized by the Department of Physics, Bharathiar University, Coimbatore (September 21 and 22, 2019).
58. Delivered a Distinguished lecture on "The Contribution of Vikram Sarabhai for the Nation Building" at the Department of Library Information Science, Bharathidasan University (18-09-2019).
59. Delivered a guest lecture on "understanding Curvilinear Coordinates from Physics Students Perspective" at J. J. College of Arts and Science (Autonomous), Pudukottai (07-08-2019).
60. Delivered a set of lectures to Post Graduate students of Department of Physics, AVC College, Mayiladuthurai. (02-08-2019).
61. Acted as a Resource Person for the "Bridge Course on Mathematical Physics" for the Post – Graduate Students of Physics Department, Lady Doak College, Madurai (30-07-2019).
62. Delivered a lecture entitled "Fundamentals of Statistical Mechanics" in Physics Association Programme at Sri S. Ramasamy Naidu Memorial College, Sattur, (26.07.2019).
63. Delivered a set of lectures to Post Graduate students participated in the Summer Training Programme in Physics (STPIP – 2019) conducted by the Academy of Sciences, Chennai and Department of Nuclear Physics, University of Madras. (June 05 and 06, 2019).
64. Delivered a series of lecture on "Statistical Physics (Ensembles: An Introduction)", at Department of Physics, School of Advanced Sciences, Vellore Institute of Technology, Vellore (09-03-2019).
65. Delivered a set of lectures to Post Graduate students of Department of Physics, Gandhigram Rural Institute, Gandhigram. (06-03-2019).
66. Delivered guest lectures on Mathematical Physics and Statistical Mechanics at the Department of Physics, Lady Doak College, Madurai (12-02-2019)
67. Delivered a lecture entitled "Ensembles", at Department of Physics, Anna University, Chennai (06-02-2019).

68. Delivered a lecture entitled “Curvilinear Coordinate System”, at Department of Physics, D.G.Vaishnav College, Chennai (06-02-2019).
69. Delivered a series of special lectures covering topics in Mathematical Physics and Statistical Physics on Feb. 5, 7 and 8, 2019 in the Department of Nuclear Physic, University of Madras, Chennai.
70. Acted as a Resource Person and delivered a talk on “Visualisation of Vectors” in the Association Meeting organized by the PG and Research Department of Physics, Seethalakshmi Ramaswami College, Tiruchirappalli (25-01-2019).
71. Delivered a invited lecture entitled “Importance of Mathematical Physics”, at the Department of Physics, Gobi Arts and Science College, Gobichettipalayam (28-12-2018).
72. Acted as a Resource Person and delivered a talk on “Role of Mathematics in Physics” in the Special Meeting organized by the PG Department of Physics, Vellalar College for Women, Erode (28-12-2018)
73. Delivered a lecture entitled “Classical and Quantum Studies of a Position Dependent Mass Nonlinear Oscillator”, at Department of Physics, Panjab University, Chandigarh (7-12-2018)
74. Acted as a Resource Person in the special meeting Programme “Introduction to Differential Equations” organized by the Department of Physics, Vellalar College for Women, Erode (6-10-2018).
75. Acted as a Resource Person for National Seminar on “An Overview on Statistical Physics” at Kongunadu Arts and Science College, Coimbatore (31-07-2018).
76. Delivered a talk in One Day Seminar on Vector Analysis at Department of Sciences, Amritha School of Engineering, Amritanagar, Coimbatore (24-07-2018).
77. Delivered a series of lectures on “Vector Analysis” for the students of PSGR Krishnammal College for Women, Coimbatore (12.07.2018 and 13-07-2018).
78. Delivered a guest lecture on “Combinatorial Problems with Applications to Physics” in the Department of Mathematics, School of Advanced Studies VIT, Vellore on 11-04-2018.
79. Delivered a series of lectures on “Statistical Physics” at Physics Department, SASTRA University, Thanjavur (2.04.2018).
80. Delivered a lecture entitled “Tensor Analysis” at Sri S. Ramasamy Naidu Memorial College, Sattur, (22.03.2018).
81. Delivered an invited lecture entitled “Some Terminolgies in Statistical Physics” on 1.03.2018 under UGC-DSA Lecture Series Program held at the School of Physics, Madurai Kamaraj University.
82. Presented a talk entitled “A view on Mathematical Concepts in Physics” at *Department of Physics, N.G.M.College, Pollachi,* Tamil Nadu, India (19-02-2018).
83. Presented a talk entitled “Introduction to Ensembles” at *Department of Physics, V.V.Vanniaperumal College for Women, Virudhunagar,* Tamil Nadu, India (01-02-2018).
84. Delivered a lecture on the topic “Why Statistical Methods need for Physicists” at *Department of Physics, Nehru Memorial College, Puthanampatii,* Tamil Nadu, India (24-01-2018).

85. Delivered a lecture entitled “Vector Calculus: An Informal Introduction” orgainized by Physics Association, Presidency College, Chennai (20.12.2017).
86. Delivered a lecture entitled “Statistical Mechanics” at Government Arts College, Coimbatore (10.10.2017).
87. Delivered a lecture entitled “Application of Mathematics in Physics” at Sri S. Ramasamy Naidu Memorial College, Sattur, (07.03.2017).
88. Delivered a lecture entitled “Vector Analysis” organized by PSGR Krishnammal College for Women, Coimbatore (30.08.2017).
89. Acted as a Resource Person in the two days seminar on Emerging Trends in Materials and Technology – ETMAT 2017 organized by the JEPPIAAR Engineering College, Chennai, during July 27-28, 2017.
90. Delivered a lecture entitled “Vector Calculus” at Government Arts College, Coimbatore (07.03.2017).
91. Delivered a lecture entitled “Introduction to Vector Calculus” at Chidambaram Pillai College for Women, Mannachanallur, Tiruchirappalli (23.02.2017).
92. Delivered a lecture on Curvilinear Coordinates and Visualization of Vector Fileds at Sri S. Ramasamy Naidu Memorial College, Sattur, (20.02.2017).
93. Delivered a set of lectures entitled ”Insights into Vector Calculus: Through Digital Tool” in the Academic Staff College, VIT, Vellore on 11-02-2017.
94. Delivered a special lecture on “Vector Analysis from Geometrical Point of View” at Department of Physics, Bharathiar University, Coimbatore (2-3 Feb..2017).
95. Delivered three one hour lectures on “Visualizing Mathematics” at Department of Physics, Anna University, Chennai (26.10.2016).
96. Presented an invited talk entitled “Vector Analysis” at Cauvery College for women, Tiruchirappalli (30.08.2016).
97. Delivered an invited lecture entitled “Introduction to Vector Calculus” on 31.03.2016 under UGC-DSA Lecture Series Program held at the School of Physics, Madurai Kamaraj University.
98. Delivered a lecture at “National Seminar on Dynamical Systems and Chaos” held at Post Graduate Department of Physics, St. Mary’s College, Sulthan Bathery, Kerala, during 25 – 27, January 2016.
99. Given a talk at *Department of Physics, Government College for Women, Kumbakonam*, Tamil Nadu, India.
100. Presented a talk on Science Day Celebrations (28-02-2006) at *Department of Physics, Nehru Memorial College, Puthanampatii,* Tamil Nadu, India.
101. Presented a talk at the *Department Science and Humanities, Saveetha University, Chennai,* Tamil Nadu (25-2-2009)
102. Delivered a talk at Department of Physics, Jamal Mohamed College, Tiruchirappalli, Tamil Nadu (19-12-2013).
103.

School/ Winter School/ Summer School/ Workshop

1. Delivered a lecture in the two day National Workshop on Advances in Quantum Mechanis and Spectroscopy Techniques for Versatile Applications (AQST-2026) entitled "Entanglement: Origin, Detection and Current Scenario" organized by the Department of Physics, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore (24-2-2026 - 25-2-2026).
2. Delivered a lecture in the Workshop on Nonlinear Science: A multidisciplinary perspective entitled "Physics and Mathematics of Quantum Computing" organized by the Department of Physics, Bharathidasan University, Tiruchirappalli (29-1-2025).
3. Acted as a Resource person for One Day Workshop on "Mastering the Art of Academic Publishing in Journals" organized by the Department of Social Work, Bharathidasan University, Khajamalai Campus, Tiruchirappalli (21-01-2025).
4. Delivered a lecture in the Workshop on Statistical Techniques in Astrophysics & Cosmology using Python entitled "An introduction to Machine Learning and the Background Mathematics – I" organized by the Department of Physics, Bharathidasan University, Tiruchirappalli (20-10-2023).
5. Delivered a set of lectures in the Workshop on Computational Physics with Python entitled "An introduction to Machine Learning and the Background Mathematics – I" organized by the Department of Physics, Bharathidasan University, Tiruchirappalli (30-09-2022).
6. Acted as a Resource person for "One Day National Level Workshop on Perceiving Calculus Via Digital Mode" through online mode organized by the Department of Mathematics, School of Advanced Sciences, VIT, Vellore (29-09-2022).
7. Acted as a Resource person for "A Two-day State Level Workshop on The Essence of Vectors and Their Usefulness in Classical and Quantum Physics" organized by Department of Physics Sri. S. Ramasamy Naidu Memorial College, Sattur (22-09-2022 to 23-09-2022).
8. Acted as a Resource person for a five day workshop on "Learning quantum mechanics hrough experiments" through online mode at Sri S. Ramaswamy Naidu Memorial College, Sattur, Virudhunagar (08-02-2021 to 12-02-2021).
9. Acted as a Resource person for the Five Days Workshop on "Spherica and Cylindrical Coordinates – Mathematical Physics" funded under DBT Star College Scheme and organized by the Department of Physics, V. V. Vanniaperumal College for Women, Virudhunagar (16.11.2020 to 20.11.2020).
10. Delivered a set of 5 lectures in the Compact Course on Theory, Numerics and Applications of Differential Equations" held at the Department of Mathematics, Bharathidasan Uversity, Tiruchirappalli, during the period 27,28 & 31, January 2020.
11. Acted as a Resource Person in the Resource Person in Two day State Level Workshop on "Mathematical and Statistical Physics" at Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore (16 & 18, Sept. 2019)
12. Delivered a set of 5 lectures in the SERB School on Nonlinear Dynamics held at the Department of Physics, Guru Nanak Dev University, Amritsar, during the period 4-6, December 2018.

13. Acted as a Resource Person in the Resource Person in the Regional Level Workshop on Theoretical Physics organized by Bishop Heber College, Trichy (27 & 28, Nov. 2018).
14. Acted as a Chief Resource Person in the Mini Winter School on "Mathematical Physics and Statistical Mechanics (MSPM-18) at Government College for Women (Autonomous), Kumbakonam (3-5, Oct. 2018).
15. Delivered a set of lectures in the one day workshop on "Understanding Calculus Through Digital Mode II" for the Faculties of VIT, Vellore (25-09-2018).
16. Delivered a series of lectures in the one day workshop on "Thermodynamics of some simple systems: Ensemble approach" at Nehru Memorial College, Puthanampatti, Tiruchirappalli (11.09.2018).
17. Delivered a set of lectures in the One Day Workshop on "Understanding Calculus Through Digital Media" in the Academic Staff College, VIT, Vellore on 10-04-2018.
18. Delivered a lecture on the topic Publication Phisihing in the Summer School on Materials Science conducted by the UGC – Human Resource Development Centre, Bharathidasan University,Tiruchirappalli, on 7-3-2018.
19. Delivered a series of lectures in the two day National Level workshop on Mathematical Physics conducted by Department of Physics, Kongunadu Arts and Science College, Coimbatore, Tamilnadu during 6-7, September 2017.
20. Delivered a set of 4 lectures in the DST-SERC School on Nonlinear Dynamics held at the Department of Physics, PSG College of Technology, Coimbatore, during the period 1-2, December 2016.
21. Given a series of lectures in the Workshop on "Mathematical Methods in Physics" conducted by Srinivasa Ramanujan Institute for Basic Sciences, Kottayam during 3-5 September 2016.
22. Delivered lecture in one day workshop on "Application of Vector Calculus" at Nehru Memorial College, Puthanampatti, Tiruchirappalli (18.08.2016).
23. Delivered a series of 5 lectures in the DST-SERC School on Nonlinear Dynamics held at the Department of Physics, Panjab University, Chandigarh, during the period 5^{th}-9^{th} February 2014.
24. Delivered a series of 4 lectures in the DST-SERC School on Nonlinear Dynamics held at the Department of Physics, Central University of Rajasthan, Rajasthan, during the period 4^{th}-6^{th} December 2014.

Journal Publications

1. A. Niveth, S. Karthiga and **M. Senthilvelan,** Enhancement of detached topological edge modes in the presence of non-Hermitian on-site potentials, J. Phys.: Condens. Matter **38**, 205401 (2026).
2. Nissi Thomas and **M. Senthilvelan,** Normal mode splitting induced synchronization blockade in coupled quantum van der Pol oscillators, Phys. Rev. A **113**, L020202 (2026).
3. R. Shashangan, S. Sudharsan, Dibakar Ghosh and **M. Senthilvelan,** Controlling extreme events in neuronal networks: A single driving signal appraoch, Chaos **36**, 023131 (2026).

4. N. Sinthuja, **M. Senthilvelan** and K. Murali, Transmission of positions in a modified Noguchi electrical transmission line modeled through a nonlinear Schrödinger equation with external linear potential, Nonlinear Science **6**, 100106 (2026).

5. N. Vishnu Priya, S. Monisha and **M. Senthilvelan,** Degenerate nonlinear wave solutions and their interactions in a generalized fifth-order nonlinear Schrödinger equation, J. Phys. Soc. Jpn. **94**, 094006 (2025).

6. R. Shashangan, S. Sudharsan, Dibakar Ghosh and **M. Senthilvelan,** Propagation of extreme events in multiplex neuronal networks, Phys. Rev. E **112**, 014310 (2025).

7. S. Thamizharasan, V. K. Chandrasekar, **M. Senthilvelan,** Dynamics of adaptive network with connection delay and external stimulus**,** Chaos Soliton Fract. Chaos, Solitons & Fract. **199**, 116747 (2025).

8. N. Sinthuja, **M. Senthilvelan** and K. Murali, Breather and positon excitations in a nonlinear electrical transmission line modeled by the Kundu-Eckhaus equation, EPL **151**, 12003 2025.

9. N. Sinthuja, **M. Senthilvelan** and K. Murali, Baseband Modulational Instability and Manifestation of Breather and Super Rogue Wave Phenomena in Modified Noguchi Electrical Transmission Line, Physics Letters A **553** 130701(2025).

10. M. Preethi and **M. Senthilvelan,** Quantum Squeezing Effects in Coupled van der Pol Oscillators, Quantum Information Processing **24** 119 (2025).

11. M. D. Sreelakshmi, N. Sinthuja, N. Vishnu Priya and **M. Senthilvelan,** Robustness of the solitons against perturbations in certain nonlocal nonlinear Schrödinger-type equations in Nonlinear Physics, Physica Scripta **100** (3), 035227 (2025).

12. R. Sree Ardhanareeswaran, S. Sudharsan, M. Senthilvelan, Dibakar Ghosh, Intermittent cluster synchronization in a unidirectional ring of bursting neurons, Phys. Rev. E **111** (1), 014215 (2025).

13. N. Vishnu Priya, K. Thulasidharan and **M. Senthilvelan,** Hybrid solutions of real and complex modified Korteveg-de Vries equations and their predictions through deep learning algorithm, Nonlinear Dyn. **113** (11), 13585-13613 (2025).

14. A. Niveth, S. Karthiga and **M. Senthilvelan,** An unusual phase transition in a non-Hermitian Su-Schrieffer-Heeger model, J. Phys.: Condens. Matter **37**, 075401 (2025).

15. K. Thulasidharan, N. Sinthuja, N. Vishnu Priya and **M. Senthilvelan,** On examining the predictive capabilities of two variants of PINN in validating localised wave solutions in the generalized nonlinear Schrödinger equation, Commun. Theor. Phys. **76** (11), 115801 (2024).

16. S Thamizharasan, V K Chandrasekar, **M Senthilvelan,** DV Senthilkumar, Stimulus-induced dynamical states in an adaptive network with symmetric adaptation, Phys. Rev. E. **110** (3), 034217 (2024).

17. K. Thulasidharan, N. Vishnu Priya, S. Monisha and **M. Senthilvelan,** Predicting positon solutions of a family of Nonlinear Schrödinger equations through Deep Learning algorithm, Phys. Lett. A, **511,** 129551 (2024).

18. R. Shashangan, S. Sudharsan, A. Venkatesan and **M. Senthilvelan,** Mitigation of extreme events in an excitable system, Eur. Phys. J. Plus **139,** 203 (2024).

19. S. Thamizharasan, V. K. Chandrasekar, **M. Senthilvelan** and D. V. Senthilkumar, Hebbian and anti-Hebbian adaptation-induced dynamical states in adaptive networks, Phys. Rev. E. **109**, 014221 (2024).

20. S. Monisha, N. Vishnu Priya, **M. Senthilvelan,** Degenerate soliton solutions and their interactions in coupled Hirota equation with trivial and nontrivial background, Nonlinear Dyn. **111**, 21877–21894 (2023).

21. N. Sinthuja, S. Rajasekar and **M. Senthilvelan**, Instability of single- and double-periodic waves in the fourth-order nonlinear Schrödinger equation, Nonlinear Dyn. **111**, 16497–16513, (2023).

22. R. Mohanasubha and **M. Senthilvelan,** A Class of Solvable Nonlinear Isochronous Systems and Their Classical Dynamics**,** Qual. Ther. Dyn. Sys. **22**, 40 (2023).

23. R. Mohanasubha, Subhasri D and **M. Senthilvelan** and Karthikeyan R, On exploring λ-symmetries, Darboux polynomials and other integrable quantifiers of Easter Island Population Model, Pramana, **97**, 97 (2023).

24. V. K. Chandrasekar, R. Gladwin Pradeep, R. Mohanasubha, **M. Senthilvelan** and M. Lakshmanan, Method of deriving Lagrangian for two dimensional systems, Eur. Phys. J. Plus, **138**, 52 (2023).

25. N. Sinthuja and **M. Senthilvelan**, Rogue wave solutions over double-periodic wave background of a fifth-order nonlinear Schrödinger equation with quintic terms, Int. J. Mod. Phys. B, 2450082 (2023).

26. R. Mohanasubha and **M. Senthilvelan,** A study on Darboux polynomials and their significance in determining other integrability quantifiers: A case study in third-order nonlinear ordinary differential equations, Pramana, **97**, 28 (2023).

27. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Finding nonlocal and contact/dynamical symmetries of Riccati chain, Pramana, **97**, 30 (2023).

28. L. E. Barnes, A. N. W. Hone, **M. Senthilvelan**, and S. Stalin, Similarity reductions of peakon equations: integrable cubic equations, J. Phys. A: Math. Theor, **55**, 424002 (2022).

29. P. Muruganandam and **M. Senthilvelan,** Manifestation of strange nonchaotic attractors in extended systems: A study through out-of-time-ordered correlators, Eur. Phys. J. B, **95,** 124 (2022).

30. S. Monisha, N. Vishnu Priya, **M. Senthilvelan** and S. Rajasekar, Higher order smooth positon and breather positon solutions of an extended nonlinear Schrödinger equation with the cubic and quartic nonlinearity, Chaos, Solitons and Fractals, **162**, 112433 (2022).

31. Nissi Thomas and **M. Senthilvelan,** Quantum Synchronization in quadratically coupled quantum van der Pol oscillators, Phys. Rev. A **106**, 012422 (2022).

32. S. Sudharsan, A. Venkatesan, P. Muruganandam and **M. Senthilvelan,** Suppression of extreme events and chaos in a velocity-dependent potential system with time-delay feedback, Chaos, Solitons and Fractals, **161**, 112321 (2022).

33. N. Vishnu Priya, S. Monisha, **M. Senthilvelan** and Govindhan Rangarajan, Nth-order smooth positon and breather-positon solutions of a generalized nonlinear Schrödinger equation, Eur. Phys. J. Plus **137,** 1-13 (2022).

34. J. Meiyazhagan, K. Manikandan, J. B. Sudharsan and **M. Senthilvelan,** Data driven soliton solution of the nonlinear Schrödinger equation with certain PT-symmetric potentials via deep learning, Chaos **32,** 053115(2022).

35. S. Thamizharasan, V. K. Chandrasekar, **M. Senthilvelan**, Rico Berner, Eckehard Schoell, DV. Senthilkumar, Exotic states induced by co-evolving connection weights and phases in complex networks, Phys. Rev. E **105,** 034312 (2022).

36. J. Ramya Parkavi, R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A Class of Isochronous and Non-Isochronous Nonlinear Oscillators, Eur. Phys. J. Spec. **231,** 2387-2399 (2022).

37. J. Meiyazhagan, S. Sudharsan, A. Venkatesan and **M. Senthilvelan**, Prediction of occurrence of extreme events using machine learning, Eur. Phys. J. Plus **137,** 1-20 (2022).

38. Nissi Thomas, S Karthiga, **M Senthilvelan,** High-order synchronization in a system of nonlinearly coupled Stuart-Landau oscillators, Eur. Phys. J. Plus **136,** 1222 (2021).

39. N. Sinthuja, K. Manikandan and **M. Senthilvelan**, Formation of rogue waves on the periodic background in a fifth-order nonlinear Schrödinger equation, Phys. Lett. A **415**, 127640 (2021).

40. S. Sudharsan, A. Venkatesan and **M. Senthilvelan,** Constant bias and weak second periodic forcing: tools to mitigate extreme events. Eur. Phys. J. Plus **136,** 817 (2021).

41. J. Meiyazhagan, S. Sudharsan and **M. Senthilvelan**, Model-free prediction of emergence of extreme events in a parametrically driven nonlinear dynamical system by deep learning, Eur. Phys. J. B **94,** 156 (2021).

42. N. Sinthuja, K. Manikandan and **M. Senthilvelan**, Rogue waves on an elliptic function background in complex modified Korteweg-de Vries equation, Phys. Scr. **96,** 105206 (2021).

43. S. Sudharsan, A. Venkatesan and **M. Senthilvelan,** Symmetrical emergence of extreme events at multiple regions in a damped and driven velocity-dependent mechanical system, Phys. Scr. **96,** 095216 (2021).

44. K. Manikandan, J. B. Sudharsan and **M. Senthilvelan**, Nonlinear Tunneling of solitons in a variable coefficients nonlinear Schrödinger equation with PT-symmetric Rosen-Morse potential, Eur. Phys. J. B **94,** 122 (2021).

45. M. Pradeepa, N. Vishnu Priya and **M. Senthilvelan**, Penrose instabilities and the emergence of rogue waves in Sasa–Satsuma equation, Eur. Phys. J. Plus **136,** 591 (2021).

46. N. Sinthuja, K. Manikandan and **M. Senthilvelan**, Rogue waves on the double periodic background in Hirota equation, Eur. Phys. J. Plus **136,** 305 (2021).

47. S. Sudharsan, A. Venkatesan, P. Muruganandam and **M. Senthilvelan**, Emergence and mitigation of extreme events in a parametrically driven system with velocity-dependent potential, Eur. Phys. J. Plus **136,** 129 (2021).

48. K Manikandan, N. Vishnu Priya, **M. Senthilvelan** and R. Sankaranarayanan, Higher-order matter rogue waves and their deformations in two-component Bose–Einstein condensates, Waves in Random and Complex Media **35**, 867-886 (2020).

49. Response to "Comment on 'Classification of Lie point symmetries for quadratic Lienard type equation x + f(x)(x) over dot (2) + g(x)=0'" [J. Math. Phys. **61**, 044101 (2020)]

50. M. Manoranjani, R. Mohanasubha, V.K. Chandrasekar and **M. Senthilvelan,** Extended Prelle-Singer procedure and Darboux polynomial method: An unknown interconnection**,** Int. J. Nonlinear Mech. **118,** 103284 (2020).

51. N. Vishnu Priya, **M.Senthilvelan** and G.Rangarajan, On the role of four-wave mixing effect in the interactions between nonlinear modes of coupled generalized nonlinear Schrödinger equation, Chaos **29**, 123135 (2019).

52. R. Mohanasubha, V.K. Chandrasekar and **M. Senthilvelan,** A Method of Identifying Integrability Quantifiers from an obvious λ symmetry in Second Order Nonlinear Ordinary Differential Equations**,** Int. J. Nonlinear Mech. **116,** 318-323 (2019).

53. R. Mohanasubha and **M. Senthilvelan,** A Note on the application of Darboux Polynomial Method to an Nonlinear Oscillator Equation**,** Int. J. Nonlinear Mech. **115,** 49-52 (2019).

54. S. Stalin, **M. Senthilvelan** and M. Lakshmanan, Energy Sharing Collisions and the Dynamics of Degenerate Solitons in the nonlocal Manakov System, Nonlinear Dynamics **95**, 1767-1780 (2019).

55. S. Stalin, R. Ramakrishnan, **M. Senthilvelan** and M. Lakshmanan, Nondegenerate Solitons in Manakov system, Phys. Rev. Lett. **122,** 043901 (2019).

56. S. Stalin, **M. Senthilvelan** and M. Lakshmanan, Degenerate soliton solutions and their dynamics in the nonlocal Manakov system: I Symmetry preserving and symmetry breaking solutions, Nonlinear Dyn. **95**, 343(2019).

57. N. Vishnu Priya, G.Rangarajan, M. Lakshmanan and **M.Senthilvelan,** On Symmetry Preserving and Symmetry Broken Bright, Dark and Antidark Soliton Solutions of Nonlocal Nonlinear Schrodinger Equation, Phys Lett. A **383**, 15(2019).

58. K. Manikandan, S. Stalin and **M. Senthilvelan,** Dynamical behaviour of solitons in a PT-invariant nonlocal nonlinear Schrodinger equation with distributed coefficients, Eur. Phys. J. B **91**, 291 (2018).

59. K. Manikandan, N. Vishnu Priya, **M. Senthilvelan** and R. Sankaranarayanan, Deformation of dark solitons in a PT-invariant variable coefficients nonlocal nonlinear Schrodinger equation, Chaos **28,** 083103 (2018).

60. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the interconnections between various analytic approaches in coupled first-order nonlinear differential equations, Comm. Nonlinear Sci. and Num. Sim **62**, 213 (2018).

61. S. Karthiga, V. Chithiika Ruby and **M. Senthilvelan**, An inclusive SUSY approach to position dependent mass systems, Phys Letts. A **382**, 1645-1650 (2018).

62. K. Premalatha, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Stable amplitude chimera states in a network of locally coupled Stuart-Landau oscillators, Chaos **28**, 033110 (2018).

63. R. Mohanasubha, V. K. Chandrasekar and **M. Senthilvelan,** A note on deriving linearizing transformations for a class of second order nonlinear ordinary differential equations, Nonlinear Analysis Real World Appli. **39**, 202 (2018).

64. S. Stalin, **M. Senthilvelan** and M. Lakshmanan, Nonstandard bilinearization of PT-invariant nonlocal nonlinear Schrödinger equation: Bright soliton solutions, Phys Letts. A **381,** 2380 (2017).

65. S. Karthiga, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Controlling of blow-up responses by nonlinear PT symmetric coupling, Phys. Rev. A **95,** 033829 (2017).

66. K. Premalatha, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Chimera like states in two distinct groups of identical populations of coupled Stuart-Landau oscillators, Phys. Rev. E 95, 022208 (2017).

67. R. Mohanasubha and **M. Senthilvelan,** On the symmetries of a nonlinear non-polynomial oscillator, Commun. Nonlinear Sci. Numer. Simulat. **43**, 111-117 (2017).

68. S. Karthiga, V. Chithiika Ruby, **M. Senthilvelan** and M. Lakshmanan, Quantum Solvability of a general ordered position dependent mass system: Mathews-Lakshmanan oscillator, J. Math. Phys. **58**, 102110, (2017).

69. S. Karthiga, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Systems that become PT symmetric through interaction, Phys. Rev. A **94**, 023829 (2016).

70. K. Premalatha, V. K. Chandrasekar, **M.Senthilvelan** and M. Lakshmanan, Imperfectly Synchronized states and chimera states in two interacting populations of nonlocally coupled Stuart-Landau oscillators, Phys. Rev. E, **94**, 012311 (2016).

71. K. Manikandan and **M. Senthilvelan,** An analysis of spatiotemporal localized solutions in the variable coefficients (3+1)-dimensional nonlinear Schrödinger equation with six different forms of dispersion parameters, Chaos **26,** 073116 (2016).

72. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Interplay of symmetries and other integrability quantifiers in finite dimensional integrable nonlinear dynamical systems, Proc. R. Soc. A **472,** 20150847 (2016).

73. N. Ananth and **M. Senthilvelan,** Identifying non-k-separability of a class of N-qubit complete graph states using correlation tensors, Eur. Phys. J. D **70**, 149 (2016).

74. K. Manikandan, **M. Senthilvelan and** R. A. Kraenkel, On the characterization of vector rogue waves in two-dimensional two coupled nonlinear Schrödinger equations with distributed coefficients, Eur. Phys. J. B, **89**, 218 (2016).

75. K. Premalatha, V.K.Chandrasekar, **M.Senthilvelan** and M. Lakshmanan, Different kinds of chimera death states in nonlocally coupled oscillators, Phys. Rev. E **93**, 052213 (2016).

76. Ajey K. Tiwari, S. N. Pandey, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, The inverse problem of a mixed Li\'enard type nonlinear oscillator equation from symmetry perspective, Acta Mechanica **227**, 2039 (2016).

77. K. Manikandan, P. Muruganandam, **M. Senthilvelan** and M. Lakshmanan, Manipulating localized matter waves in multi-component Bose-Einstein condensates, Phys. Rev. E **93**, 032212 (2016).

78. N. Vishnu Priya and **M. Senthilvelan,** N- bright - bright and N- dark – dark solitons of the coupled generalized nonlinear Schrödinger equations, Commun. Nonlinear Sci. Numer. Simulat. **36**, 366-377 (2016).

79. K. Manikandan, **M. Senthilvelan** and R. A. Kraenkel, Amplification of matter rogue waves and breathers in quasi-two-dimensional Bose-Einstein condensates, Eur. Phys. J. B, **89**, 30 (2016).

80. N. Ananth and **M. Senthilvelan,** On the non-k-separability of Dicke class of states and N-qudit W states, Int. J. Theor. Phys **55**, 1854-1870 (2016).

81. S. Karthiga, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Twofold-PT symmetry in nonlinearly damped dynamical systems and tailoring PT regions with position dependent loss-gain profiles, Phys. Rev. A **93**, 012102 (2016).

82. R. Gladwin Pradeep, V. K. Chandrasekar, R. Mohanasubha, **M. Senthilvelan** and M. Lakshmanan, Order preserving contact transformations and dynamical symmetries of scalar and coupled Riccati and Abel chains, *Commun. Nonlinear Sci. Numer. Simulat.* **36**, 303 (2016).

83. Ajey K. Tiwari, S. N. Pandey, **M. Senthilvelan** and M. Lakshmanan, Lie point symmetries classification of the mixed Lienard type equation, *Nonlinear Dynamics* **82**, 1953 (2015).

84. K. Premalatha, V. K.Chandrasekar, **M.Senthilvelan** and M. Lakshmanan, Impact of symmetry breaking in networks of globally coupled oscillators, Phys. Rev. E **91**, 052915 (2015).

85. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Interconnections between various analytic approachs applicable to third order nonlinear differential equations, *Proc. Roy. Soc. Lond. Series* **471**: 20140720 (2015).

86. N. Ananth, V. K. Chandrasekar and **M. Senthilvelan**, On the separability criterion of bipartite states with certain non-Hermitian operators, Int. J. Theor. Phys. **54**, 2632 (2015).

87. N. Ananth, V. K. Chandrasekar and **M. Senthilvelan,** Criteria for non-k-separability of n-partite quantum states, Eur. Phys. J. D **69**, 56 (2015).

88. V. Chithiika Ruby, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Removal of ordering ambiguity for a class of position dependent mass quantum systems with an application to the quadratic Lienard type nonlinear oscillators, J. Math. Phys. **56**, 012103 (2015).

89. N. Vishnu Priya and **M. Senthilvelan,** On the characterization of breather and rogue wave solutions and modulation instability of a coupled generalized nonlinear Schrödinger equations, *Wave Motion* **54** 125 (2015).

90. N. Vishnu Priya and **M.Senthilvelan,** Generalized Darboux Transformations and N-th order rogue wave solution of a general coupled nonlinear Schrödinger equations, Comm. Nonlinear Sci. and Num. Sim., **20**, 401-420 (2015).

91. N. Vishnu Priya, **M.Senthilvelan** and M. Lakshmanan, Breathers and rogue waves: Demonstration with coupled nonlinear Schrödinger family of equations Pramana **84**, 339 (2015).

92. **M. Senthilvelan,** V. K. Chandrasekar and R. Mohanasubha, Symmetries of nonlinear ordinary differential equations: the modified Emden equation as a case study, Pramana **85**, 755-787 (2015).

93. K. Manikandan, P.Muruganandam, **M.Senthilvelan** and M. Lakshmanan, Manipulating matter-rogue waves and breathers in Bose-Einstein condensates Phys. Rev. E **90**, 062905 (2014).

94. N. Vishnu Priya and **M.Senthilvelan,** Higher order rogue wave solutions of general coupled nonlinear Schrödinger equations, Physica Scripta . **90** 025203 (2014).

95. V. Chithika Ruby and **M.Senthilvelan**, Photon modulated coherent states of a generalized isotonic oscillator by Weyl ordering and their non-classical properties, Int. J. Theor. Phys. **53** 4338-4350 (2014).

96. N. Vishnu Priya, **M.Senthilvelan** and M. Lakshmanan, Dark solitons, Breathers and Rogue Wave Solutions of the Coupled Generalized Nonlinear Schrödinger Equations, Phys. Rev. E **89** 062901 (2014).

97. P. R. Gordoa, A. Pickering and **M. Senthilvelan,** The Prelle-Singer method and Painleve hierarchies, *J. Math. Phys.,* **54** 053510 (2014).

98. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Interplay of symmetries, null forms, Darboux polynomials, integrating factors and Jacobi multipliers in integrable second order differential equations, *Proc. Roy. Soc. Lond.. Series A* **470**, 20130656 (2014).

99. V. Chithiika Ruby, P. Muruganandam and **M. Senthilvelan**, Nonlinear time evolution of coherent states with observation of super revivals in a generalized isotonic oscillator, Int. J. Geometric Meth. Mod. Phys. **11** 1450027 (2014).

100. R. Mohanasubha, M.I. Sabiya Shakila and **M. Senthilvelan,** On the linearization of isochronous centre of a modified Emden equation with linear external forcing, *Communications in Nonlinear Science and Numerical Simulation* **19** *799-806* (2014).

101. R. Mohanasubha, J.H.Sheeba, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A nonlocal connection between certain linear and nonlinear ordinary differential equations - Part II: Complex nonlinear oscillators, *Applied Mathematics and Computation* **224** *593-602* (2013).

102. N. Vishnu Priya, **M. Senthilvelan** and M. Lakshmanan, Akhmediev breathers, Ma solitons and general breathers from rogue waves: A case study in Manakov system, Phys. Rev. E **88,** 022918 (2013).

103. Ajey K. Tiwari, S. N. Pandey, M. Senthilvelan *and* M. Lakshmanan, Classification of Lie point symmetries for quadratic Lienard type equation $\ddot{x} + f(x)\dot{x}^2 + g(x) = 0$, *J. Math. Phys.,* **54,** 053506 (2013);

104. Erratum *J. Math. Phys.,* **55**, 059901 (2014).

105. R. A. Kraenkel, K. Manikandan and **M. Senthilvelan,** On certain new exact solutions of a diffusive Predator-Prey system, Comm. Nonlinear Sci. and Num. Sim., **18**, 1269 (2013).

106. V. Chithiika Ruby, S. Karthiga and **M.Senthilvelan**, Ladder operators and squeezed coherent states of a 3-dimensional generalized isotonic nonlinear oscillator, J. Phys. A: Math. Theor. **46,** 025305 (2013).

107. V. Chithiika Ruby, **M.Senthilvelan** and M.Lakshmanan, Exact quantization of a PT symmetric (reversible) Lienard type nonlinear oscillator, J. Phys. A: Math. Theor. **45** 382002 (2012) (Fast Track Communications).

108. V. Chithiika Ruby and **M.Senthilvelan**, An observation of quadratic algebra, dual family of nonlinear coherent states and their non-classical properties, in the generalized isotonic oscillator, J. Math. Phys. **53** 082102 (2012).

109. A. Bhuvaneswari, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the complete integrability of a nonlinear oscillator from group theoretical perspective, J. Math. Phys. **53,** 073504 (2012).

110. S. Stalin and **M. Senthilvelan,** Multi loop soliton solutions and their interaction in the Degasperis - Procesi equation, Physica Scripta, **86**, 015006 (2012).

111. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A systematic method of finding linearizing transformations for nonlinear ordinary differential equations: II. Extension to coupled ODEs, *J. Nonlinear Math. Phys.,* **19**, 1250013 *(2012).*

112. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A systematic method of finding linearizing transformations for nonlinear ordinary differential equations: I. Scalar case, J. Nonlinear Math. Phys., **19** 1250012 (2012).

113. V. Chithiika Ruby and **M.Senthilvelan**, A report on the nonlinear squeezed states and their non-classical properties of a generalized isotonic oscillator, J. *Phys. A: Math. Theor.* **45** 125302 (2012).

114. M. S. Bruzon, M. L. Gandarias and **M. Senthilvelan**, Nonlocal symmetries of Riccati and Abel chains and their similarity reductions, J. Math. Phys. **53** 023512 (2012).

115. A Bhuvaneswari, R. A. Kraenkel and **M. Senthilvelan,** Application of the λ-symmetries approach and time independent integral of the modified Emden equation, Nonlinear Analysis Real World Appli. **13** 1102 (2012).

116. R. Gladwin Pradeep, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Nonlocal symmetries of a class of scalar and coupled nonlinear ordinary differential equations of any order, J. *Phys. A: Math. Theor.* **44** 445201 (2011).

117. S. Stalin and **M. Senthilvelan**, A note on the prolongation structure of the cubically nonlinear integrable Camassa-Holm type equation, Phys. Lett. A **375** 3786-3788 (2011).

118. M. S. Bruzon, M. L. Gandarias and **M. Senthilvelan,** On the nonlocal symmetries of certain nonlinear oscillators and their general solution, Phys. Lett. A **375** 2985-2987 (2011)**.**

119. A .Bhuvaneswari, R. A. Kraenkel and **M. Senthilvelan,** Lie point symmetries and the time independent integral of the damped harmonic oscillator, Phys. Scr. **83** 055005-5 (2011).

120. R. A. Kraenkel and **M. Senthilvelan**, On the particular solutions of an integrable equation governing short waves in a long-wave model, Nonlinear Analysis Real World Appli. **12** 446-449 (2011).

121. R. Gladwin Pradeep, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A nonlocal connection between certain linear and nonlinear ordinary differential equations: Extension to coupled equations, J. Math. Phys. **51** 103513-18 (2010).

122. V. Chithiika Ruby and **M.Senthilvelan**, On the generalized intelligent states and certain related nonclassical states of a quantum exactly solvable nonlinear oscillator, J. *Phys. A: Math. Theor.* **43** 415301-21 (2010).

123. V. Chithiika Ruby and **M. Senthilvelan**, On the construction of coherent states of position dependent mass Schrodinger equation endowed with effective potential, J. Math. Phys. **51** 052106-14 (2010).

124. R. Gladwin Pradeep, V.K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On Certain New Integrable Second Order Nonlinear Differential Equations and Their Connection with Two Dimensional Lotka - Volterra System, J. Math. Phys. **51** 033519-23 (2010).

125. A. N. W. Hone and **M. Senthilvelan,** Note on the Poisson Structure of the Damped Oscillator, J. Math. Phys. **50** 102902- 7 (2009).

126. R. A. Kraenkel *and* **M. Senthilvelan**, On the solutions of the position dependent effective mass Schrodinger equation of a nonlinear oscillator related with the isotonic oscillator, J. Phys. A: Math. Theor. **42** *415303-10* (2009).

127. S.N.Pandey, P.S.Bindu, **M. Senthilvelan** and M. Lakshmanan, A Group Theoretical Identification of Integrable Cases of the Liénard Type Equation : Part II: Equations having Maximal Lie Point Symmetries J. Math. Phys. **50** 102701-25 (2009).

128. S.N. Pandey, P.S. Bindu, **M. Senthilvelan** and M. Lakshmanan, A Group Theoretical Identification of Integrable Cases of the Liénard Type Equation : Part I: Equations having Non-maximal Number of Lie point Symmetries J. Math. Phys. **50** 082702-19 (2009).

129. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Complete Integrability and Linearization of Nonlinear Ordinary Differential Equations, Part V: Linearization of Coupled Second Order Equations *Proc. Roy. Soc. Lond. Series* ***A*** **465** 2369-2389 (2009).

130. R. Gladwin Pradeep, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Nonstandard Conservative Hamiltonian Structures in Dissipative/Damped Systems: Nonlinear Generalizations of Damped Harmonic Oscillator", J. Math. Phys. **50** 052901-15 (2009).

131. R. Gladwin Pradeep, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Dynamics of a Completely Integrable N- coupled Liénard Type Nonlinear Oscillator, J. *Phys. A: Math. Theor.* **42** 135206-16 (2009).

132. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Complete Integrability and Linearization of Nonlinear Ordinary Differential Equations, Part IV: Coupled Second Order Equations *Proc. Roy. Soc. Lond. Series* ***A*** **465** 609- 629 (2009).

133. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Complete Integrability and Linearization of Nonlinear Ordinary Differential Equations, Part III: Coupled First Order Equations *Proc. Roy. Soc. Lond. Series* ***A*** **465** 585-608 (2009).

134. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Reply to `Comment on ``On the general solution for the modified Emden type equation '', J. *Phys. A: Math. Theor.* **41** 068002-068006 (2008).

135. G. Bluman, A. F. Cheviakov and **M. Senthilvelan**, Solution and asymptotic/blow-up behaviour of a class of nonlinear dissipative systems, J. Math. Anal. Appl. **339** 1199-1209 (2008).

136. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the General Solutions for the Modified Emden Type Equation $\ddot{x}+\alpha x\dot{x}+\beta x^3=0$, J. *Phys. A: Math. Theor.* **40** 4717-4727 (2007).

137. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Lagrangian and Hamiltonian Description of the Damped Linear Harmonic Oscillator, J. Math. Phys. **48** 032701-12 (2007).

138. V. K. Chandrasekar, **M. Senthilvelan,** A. Kundu and M. Lakshmanan, A Non-local Connection Between Certain Linear and Nonlinear Ordinary Differential Equations/Oscillators, *J. Phys. A: Math. Gen.* **39** 9743-9754 (2006);

139. **Erratum 39** 10945 (2006).

140. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Complete Integrability and Linearization of Nonlinear Ordinary Differential Equations, Part II: Third Order Equations *Proc. Roy. Soc. Lond. Series* ***A*** **462** 1831-1852 (2006).

141. **M. Senthilvelan**, M. Torrisi and A. Valenti, Equivalence Transformations and Differential Invariants of a Generalized Nonlinear Schrodinger Equation, *J. Phys. A: Math. Gen.* **39** 3703-3713 (2006).

142. V. K. Chandrasekar, S.N.Pandey, **M. Senthilvelan** and M. Lakshmanan, A Simple and Unified Approach to Identify Integrable Nonlinear Oscillators and Systems, J. Math. Phys. **47** 023508-37 (2006).

143. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A Unification in the Theory of Linearization of Second Order Nonlinear Ordinary Differential Equations, *J. Phys. A: Math. Gen.* ***39*** L69-L76 (2006)**.**

144. P. R. Gordoa, A. Pickering and **M. Senthilvelan**, A Note on the Painlevé Analysis of a (2+1) Dimensional Camassa – Holm Equation, *Chaos, Solitons and Fractals* ***28*** *1281-1284 (*2006).

145. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Unusual Lienard Type Nonlinear Oscillator, *Phys. Rev. E.* **72** 066203-8 (2005).

146. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Application of Extended Prelle – Singer Procedure to the Modified Emden Type Equation, *Chaos, Solitons and Fractals,* **26** 1399-1406 (2005).

147. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the Complete Integrability and Linearization of Certain Second Order Nonlinear Ordinary Differential Equations, *Proc. Roy. Soc. Lond. Series* ***A*** **461** 2451-2476 (2005).

148. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Extended Prelle – Singer Method and Integrability / Solvability of a Class of Nonlinear *n*th Order Ordinary Differential Equations, *J. Nonlinear Math. Phys.,* **12** 184-201 (2005).

149. R. Gordoa, A. Pickering and **M. Senthilvelan**, Evidence for the nonintegrability of a water wave equation in 2 + 1 dimensions, *Z. Naturforsch.* ***A*** **59** 640-644 (2004).

150. J. F. Carinena, M. F. Ranada, M. Santander and **M. Senthilvelan**, A non-linear Oscillator with Quasi-Harmonic Behaviour: Two – and n – Dimensional Oscillators, *Nonlinearity,* **17** 1941-1963 (2004).

151. P. S. Bindu, **M. Senthilvelan** and M. Lakshmanan, On the Integrability, Backlund Transformations and Symmetry Aspects of a Generalised Fisher Type Nonlinear Reaction-Diffusion Equation, *International J. Bifurcation and Chaos* **14** 1577-1600 (2004).

152. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, New aspects of Integrability of force-free Duffing – van der Pol Oscillator and related nonlinear oscillators, *J. Phys. A: Math. Gen.* **37** 4527-4534 (2004).

153. L. Poladian, **M. Senthilvelan**, J. A. Besley and C. M. de Sterke, Symmetry Analysis of Self-written Waveguides in Bulk Photosensitive Media, *Phys. Rev. E,* **69** 016608-13 (2004).

154. **M. Senthilvelan**, L. Poladian and C. M. de Sterke, Symmetries and Invariant Solutions of the Planar Paraxial Wave Equation in Photosensitive Media, *Phys. Rev. E,* **65** 066607-9 (2002).

155. **M. Senthilvelan** and M. Torrisi, On Certain New Solutions of a Simplified Model for Reacting mixtures, *Nonlinear Dynamics,* **30** 277-286 (2002).

156. P. S. Bindu, **M. Senthilvelan** and M. Lakshmanan, Singularity Structure, Symmetries and Integrability of Generalized Fisher Type Nonlinear Diffusion Equation, *J. Phys. A: Math. Gen.* **34**, L689-L696 (2001).

157. **M. Senthilvelan**, On the Extended Applications of Homogeneous Balance Method, *Appl. Math. Computation,* **123** 381-388 (2001).

158. R. A. Kraenkel and **M. Senthilvelan**, Mathematical Models of Generalised Diffusion, P*hys. Scr.* **63** 353-356 (2001).

159. R. A. Kraenkel and **M. Senthilvelan**, Symmetry Analysis of an Integrable Reaction – Diffusion Equation, *Chaos, Solitons & Fractals,* **12** 463-474 (2001).

160. R. A. Kraenkel, **M. Senthilvelan** and A. I. Zenchuk, Lie Symmetry Analysis and Reductions of a Two Dimensional Integrable Generalization of the Camassa – Holm Equation, *Phys. Lett.* A **273** 183-193 (2000).

161. R. A. Kraenkel, **M. Senthilvelan** and A. I. Zenchuk, On the Integrable Perturbations of the Camassa – Holm Equation, *J. Math. Phys.* **41** 3160-3169 (2000).

162. **M. Senthilvelan** and M. Torrisi, Potential Symmetries and New Solutions of a Simplified Model for Reacting Mixtures, J. Phys. A: Math. Gen. **33** 405 -415 (2000).

163. **M. Senthilvelan** and M. Torrisi, Equivalence Transformations and Approximate Solutions of a Nonlinear Heat Conduction Model, *J. Phys. A: Math. Gen.* **31** 10005-10016 (1998).

164. **M. Senthilvelan** and M. Lakshmanan, Lie Symmetries, Kac – Moody – Virasoro Algebras and Integrability of Certain (2+1) Dimensional Nonlinear Evolution Equations, *J. Nonlinear Math. Phys.* **5** 190-211 (1998).

165. **M. Senthilvelan** and M. Lakshmanan, Lie Symmetries and Infinite Dimensional Lie Algebras of Certain (1+1) Dimensional Nonlinear Evolution Equations, *J. Phys. A: Math. Gen.,* **30** 3261-3271 (1997).

166. **M. Senthilvelan** and M. Lakshmanan, Invariance Analysis of the (2+1) Dimensional Long Dispersive Wave Equation, *J. Nonlinear Math. Phys.,* **4** 251-260 (1997).

167. **M. Senthilvelan** and M. Lakshmanan, Reply to the Comment by M.A. Almeida et al, *J. Phys. A: Math*. Gen., **29** 1143 (1996).

168. M. Lakshmanan and **M. Senthilvelan**, Lie Symmetries and Infinite Dimensional Lie Algebras and Similarity Reductions of Certain (2+1) Dimensional Nonlinear Evolution Equations, *J. Nonlinear Math. Phys.* **3** 24-39 (1996).

169. **M. Senthilvelan** and M. Lakshmanan, Lie Symmetries and Invariant Solutions of the Shallow Water Equation, *Int. J. Non-linear Mechanics* **31** 339-344 (1996).

170. **M. Senthilvelan** and M. Lakshmanan, Lie Symmetries and Infinite Dimensional Lie Algebras of Certain Nonlinear Dissipative Systems, *J. Phys. A: Math. Gen.* **28** 1929-1942 (1995).

171. M. Lakshmanan and **M. Senthilvelan**, Direct Integration of Generalized Lie or Dynamical Symmetries of Three Degrees of Freedom Nonlinear Hamiltonian Systems: Integrability and Separability, *J. Math Phys.* ***33*** 4068-4077 (1992).

172. M. Lakshmanan and **M. Senthilvelan**, Direct Integration of Generalized Lie Symmetries of Nonlinear Hamiltonian Systems with Two Degrees of Freedom: Integrability and Separability, *J. Phys. A: Math. Gen.* ***25*** 1259-1272 (1992).

Book Chapter

173. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On the symmetries of a Lienard type nonlinear oscillator, in Symmetries, Differential Equations and Applications (Springer, Switzerland, 2018) p. 266, 75-103.

174. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, On certain analytical methods in finding integrable systems and their interconnections in *Nonlinear Dynamics and its Applications* (Ed.) Swapan Kr.Ghosh (Book Centre, Santiniketan, 2013) p. 93-106.

Conference Proceedings

175. S. Monisha and **M. Senthilvelan**, A study on hybrid solutions and their interactions in the extended nonlinear Schrödinger equation, in *Proceedings of the International Conference on Nonlinear Dynamics and Systems* (Springer Proceedings in Physics, vol 405. Springer, Cham. (2024) DOI: 10.1007/978-3-031-66874-6_11)

176. J. Meiyazhagan and **M. Senthilvelan**, Prediction of chaotic attractors in quasiperiodically forced logistic map using deep learning, in *Proceedings of the International Conference on Nonlinear Dynamics and Systems* (2022). (DOI: 10.1007/978-3-030-99792-2).

177. Premalatha K., Chandrasekar V.K., **Senthilvelan M.**, Amuda R., Lakshmanan M. Effect of Nonisochronicity on the Chimera States in Coupled Nonlinear Oscillators. In: Benito R.M., Cherifi C., Cherifi H., Moro E., Rocha L.M., Sales-Pardo M. (eds) Complex Networks & Their Applications IX. COMPLEX NETWORKS 2020. Studies in Computational Intelligence, vol 943. Springer, Cham (2021).

178. S. Karthiga, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, PT-symmetric nonlinear systems and their implications in optics, *Proceedings of the Conference on Nonlinear Systems and Dynamics* (2019). (DOI: 10.29195/iascs.02.01.0011).

179. R. Mohanasubha, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, Interconnections among analytical methods for two-coupled first-order integrable systems, in *Proceedings of the Conference on Nonlinear Systems and Dynamics* (2019). (DOI: 10.29195/iascs.02.01.0010).

180. R. Gladwin Pradeep, V. K. Chandrasekar and **M. Senthilvelan**, Painleve Analysis for a Generalized Damped Nonlinear Oscillator Equation, in *Proceedings of the Fifth National Conference on Nonlinear Systems and Dynamics* (2009).

181. R. Gladwin Pradeep, V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, An algorithm to linearize third order equations through non-point transformation in “Nonlinear Dynamics” (Eds.) M. Daniel and S. Rajasekar (Narosa, New Delhi, 2008) p.41-44.

182. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A Nonlinear Oscillator with unusual dynamical properties, in *Proceedings of the Third National Systems and Dynamics (*2006) pp.1-4.

183. **M. Senthilvelan** and M. Torrisi, Symmetry analysis and linearization of the (2+1) dimensional Burger's equation, (Eds.) R. Monaco, M. P. Bianchi and S. Rionero (World Scientific, Singapore, 2006).

184. V. K. Chandrasekar, **M. Senthilvelan** and M. Lakshmanan, A Note on Solving Third Order Ordinary Differential Equations through the Extended Prelle – Singer Procedure, in *Proceedings of the Second National Systems and Dynamics (*2005) p.78-81.

185. **M. Senthilvelan**, L. Poladian and C. M. de Sterke, On Certain Rotationally Invariant Type Solutions of Self-written Waveguides in Bulk Photosensitive Media, in *Proceedings of the First National conference of Nonlinear Systems and Dynamics* (2003), p. 109-112.

186. **M. Senthilvelan** and M. Torrisi, Linearization and Solutions of a Simplified Model for Reacting Mixtures, in Proceedings of the XI International Conference on Waves and Stability in Continuous Media. (Eds.) R. Monaco, M. P. Bianchi and S. Rionero (World Scientific, Singapore, 2002) p. 539 – 547.

187. **M. Senthilvelan**, L.Poladian and C.M. de Sterke, Similarity reductions of the photosensitive self-writing equations in planar waveguides, Proceedings of the Australian Conference on Optics, Lasers and Spectroscopy 2001, Paper M29, p. 113.

188. **M. Senthilvelan**, Kac – Moody - Virasoro Algebras and Integrability of Certain Higher Dimensional Nonlinear Evolutionary Equations, CRM Proc. Lecture Notes 25, American Mathematical Society Providence RI (2000) p.401-406.

189. Section 8.4 of the paper entitled, "Painlevé Analysis, Lie Symmetries and Integrability of Coupled Nonlinear Oscillators of Polynomial Type", by M. Lakshmanan and R. Sahadevan, *Phys. Rep.* **224,** 1 (1994).

190. M. Lakshmanan and **M. Senthilvelan**, Dynamical Symmetries and Finite Dimensional Nonlinear Systems: Integrability and Separability in *Nonlinear Fields: Classical, Random and Semiclassical* (Eds.) P. Garbaczewski and Z. Popowicz, (World Scientific, Singapore, 1991) p. 665-674.

191. **M. Senthilvelan** and M. Lakshmanan, Generalised Lie Symmetries and Integrability of Coupled Nonlinear Oscillators with Two Degrees of Freedom in *Symmetries and Singularity Structures: Integrability and Chaos in Nonlinear Dynamical Systems* (Eds.) M. Lakshmanan and M. Daniel (Springer, Berlin, 1990) p. 65-77.