

Curriculum Vitae of Prof. K. Porsezian

(Citations 1104 & H-Index -16)

Professor
Department of Physics
Pondicherry University
Puducherry – 605 014 INDIA

Phone: 0091- 413-2654403 (O)
Telefax: 0091- 413-2655183 (O)
0091- 413-2354518 ®
E mail : ponzsol@yahoo.com
ponz.phy@pondiuni.edu.in

➤ EDUCATION

Ph.D. (1991) - Nonlinear Dynamics - Bharathidasan University, Tiruchirapalli, **INDIA**

Thesis: ***ON THE NONLINEAR DYNAMICS OF THE DISCRETE AND CONTINUUM SPIN SYSTEMS*** ; Supervisor: ***Prof. M. LAKSHMANAN***

M.Sc.(1985) - Physics - First Class - University of Madras, Madras, **INDIA**

B.Sc.(1983) - Physics - First Class - University of Madras, Madras, **INDIA**

➤ ACADEMIC EXPERIENCE

Professor, March'06 onwards, Pondicherry University, **INDIA**

Professor & Head, June'06 – May'09, Pondicherry University, **INDIA**

Reader, November'02- February'06, Pondicherry University, **INDIA**

Assistant Professor; May '01 to October' 02 - Anna University, **INDIA**

Lecturer; April '93 to April 2001 - Anna University, **INDIA**

Post Doctoral Fellow; June '95 to April '97 - Hannover University, **GERMANY**

Research Scientist; February '92 to March '93 - Bharathidasan University, **INDIA**

Post Doctoral Fellow; May '91 to January '92 - Bharathidasan University, **INDIA**

Research Fellow, September '85 to April '91 - Bharathidasan University, **INDIA**

➤ TOPICS OF RESEARCH

Solitons and Modulation Instability in Nonlinear Fiber Optics, Fiber Bragg Grating, Photonic fibers, Bose Einstein Condensates and Self-Induced Transparency: Solitons in Magnetic Systems, Integrability Aspects of Nonlinear Partial Differential Equations

➤ **PERSONAL DATA** : Born 5th June 1963; Married; Two Children

➤ **INSTITUTES VISITED ABROAD**

<i>S. No.</i>	<i>Period of visit</i>		Institute/ country visited	<i>Purpose of visit</i>
	<i>From</i>	<i>To</i>		
1.	July 4, 1988	July 15, 1988	Centre di Cultura, Como, ITALY	Attended a Meeting
2.	July 6, 1992	July 17, 1992	JINR, Dubna, RUSSIA	Invited Talk
3.	July 23, 1992	August 1, 1992	Technical University of Denmark, DENMARK	Invited Talk
4.	August 14, 1992	September 20, 1992	ICTP, Trieste, ITALY	Federation Scheme
5.	September 21, 1992,	September 24, 1992	University of Rome, Rome, ITALY	Invited Talk
6.	June 5, 1995	April 14, 1997	Institut fur Theoretische Physik, Hannover, GERMANY	Post Doctoral Work
7.	June 3, 1996	June 21, 1996	Institut d'Etudes Scientifiques de Cargèse, FRANCE	Attended a School and Talk
8.	August 5, 1996	August 10, 1996	Paderborn University, Paderborn, GERMANY	Invited Talk
9.	September 16, 1996	September 20, 1996	Wuppertal University, Wuppertal, GERMANY	Attended a conference
10.	September 23, 1996	September 27, 1996	Max Born Institute, Berlin, GERMANY	Invited Talk
11.	October 11, 1996	October 23, 1996	Centre d'etude Nucleaire de Saclay and Institute Mathematics, Rouen, FRANCE	Invited Talk
12.	November 18, 1996	November 22, 1996	Riso and Technical University of Denmark, Lyngby, DENMARK	Invited Talk
13.	November 25, 1996	November 29, 1996	Max Planck Institute, Berlin, GERMANY	Invited Talk
14.	December 7, 1996	December 12, 1996	UMIST, Manchester University, Manchester, UK	Invited Talk
15.	September 21, 1999	September 28, 1999	Indo-French Workshop, Nice, FRANCE	Invited Talk
16.	May 25, 2000	August 23, 2000	Tokyo University, JAPAN	INSA Fellowship
17.	May 18, 2004	August 18, 2004	Max Born Institute GERMANY	INSA Fellowship
18.	June 15, 2005	June 31, 2005	University of Nice, FRANCE	Visiting Professor
19.	July 1, 2005	July 31, 2005	Universite de Bourgogne, FRANCE	Visiting Professor
20.	September 1, 2007	October 1, 2007	Universite de Bourgogne, FRANCE	IFCPAR
21.	June 1, 2008	June 30, 2008	Universite de Bourgogne, FRANCE	IFCPAR
22.	September 7, 2009	October 6, 2009	Universite de Bourgogne, FRANCE	IFCPAR
23.	May 28, 2010	8 July 2010	Max Born Institute, Berlin, GERMANY	Collaborative work
24.	June 13, 2010	June 27, 2010	Gdansk University of Technology POLAND	Incoming Fellowship by European Union
25.	May 31, 2011	June 14, 2011	Universite de Bourgogne, FRANCE	IFCPAR
26.	March 1 2912	May 31, 2012	Institute of Condensed Matter Theory and Solid State Optics, Friedrich-Schiller- Universitat Jena GERMANY	INSA Fellowship

➤ **RESEARCH PROJECTS UNDERTAKEN**

<i>S. No.</i>	<i>Title of the Project</i>	<i>Funding Agency</i>	<i>Total (Lakhs)</i>	<i>Duration</i>
1	Higher Dimensional Soliton Dynamics in Ferromagnets	DST SERC Young Scientist	2.50	1992 - 1995
2	Nonlinear Dynamics of Some Physical and Biological Systems	CSIR	4.00	1994- 1997
3	Self Induced Transparency Solitons	INSA Young Scientist	1.50	April '97- March '00
4	Solitons in Optical Communications	AICTE	2.00 + Three Year Salary	1998-2000
5	Solitons and Chaos in Nonlinear Fiber Optics	DST SERC	11.20	1999 - 2002
6	Integrability Aspects of Nonlinear Differential-Difference Equations	NBHM	3.60	1999-2003
7	Nonlinear Dynamics of Femtosecond Pulse Propagation in Nonlinear Fibers	CSIR	9.00	January 2002 - December 2004
8	Temporal and Spatial Solitons in Nonlinear Media	DST SERC	13.00	February 2004 – January 2008
9	Solitons in Nonlinear Media	UGC	4.00 + Three Year Salary	May 2004 – April 2007
10	Nonlinear Pulse Propagation through Periodic Fibers and Waveguides	DAE BRNS	8.30	December 2004 –November 2007
11	Optical Soliton propagation in various dielectric nonlinear media	IFCPAR	90.11	May 2006 - April 2009
12	Investigation of light propagation through various nonlinear optical media	DST- Ramanna Fellowship	34.80	July 2006 – June 2009
13	Investigation of Modulation instability and Solitons in nonlinear Optical media	CSIR	20.00	April 2007 – March '11
14	Interaction Meeting on Nonlinear Dynamics	DST	10.00	2008
15	Solitons and Soliton-Induced Supercontinuum Generation in Photonic Crystal Fibers with a Liquid Core	DST-DFG	3.46	August 2008 – July 2010
16	Theoretical Investigation of Solitons in Nonlinear Optics	UGC	8.0	March 2010 – February 2013
17	Investigation of Soliton and Modulation Instability in Nonlinear Couplers and Birefringent Fibers	DAE BRNS	12.6	April 2010 – March 2013
18	Investigation of solitons and modulational instability in various nonlinear media	DST-SERC	31.40	October 2010- September 2013
19	Theoretical analysis of broad band Supercontinuum generation in photonic crystal fiber	DST-SERC	30.00	October 2010- September 2013

➤ **Workshop/Winter School, etc Organized**

1. **Organizer**, International Workshop on “ **Optical Solitons : Theory and Experiments**” at Kochi during January 24-29,2002 (with **Prof.V.C.Kuriakose, Cochin University of Science and Technology**)
2. **Organizer**, Winter School on “**Nonlinear Optics: Theory and Applications**” held at Department of Physics, Bharathidasan University, during 1-13, Dec.2003 [With **Prof.M.Lakshmanan** (Bharathidasan University) and **Prof. S. Duttagupta** (University of Hyderabad)].
3. **Convener**, DAE Awareness Workshop on “ **The Facilities of UGC-DAE Consortium for Scientific Research**” held at Department of Physics, Pondicherry University, during 4-5, November 2004
4. **Convener**, “**Second DST Programme Advisory Committee on Plasma, High Energy, Astronomy& Astrophysics and Nonlinear Dynamics** ” held at Department of Physics, Pondicherry University, during 14-15, February, 2005
5. **Convener**, One day Seminar on **Concepts of Theoretical Physics**, held at Pondicherry University on 23rd September 2005
6. Co-Director, Second **SERC School on NONLINEAR DYNAMICS** held at Pondicherry University, during 4-24, January 2006
7. **Convener**, DST FAST Track Programme committee meeting, August 23-24, 2007
8. **Convener**, DST PAC meeting on Optics, January 18, 2008
9. **Convener**, DST PAC meeting on High Energy Physics, February 11-12, 2008
10. **Convener**, National Level TPSC workshop on “ **Recent Advancements in Theoretical Physics and Quantum Computation**” 17-19, March 2009
11. **Convener**, National Level TPSC workshop on **Nonlinear Physics: Theory, Experiments and Applications** , March 29-31, 2010

➤ **Academic Membership**

1. **Member**, PG Board of Studies, Pondicherry University (2002 – 2005)
2. **Chairman**, PG & UG Board of Studies , Pondicherry University (2006 – 2008)
3. **Member**, UG Board of Studies, Periyar University (2005 – 2009)
4. **Member**, UG Board of Studies, Govt. Arts College for Men, Bharathidasan University, Kumbakonam (2006 – 2008)
5. **Member**, PG Board of Studies, Kongu Arts & Science College, Barathiyar University, Coimbatore (2007 – 2008)
6. **Member**, PG Board of Studies, Barathiyar University (2007 – 2009)
7. **Member**, Executive Council, Academic Council, Planning committee & Court, Pondicherry University (2007-2009)
8. **Member**, PG Board of Studies, Alagappa University, Karaikudi (2007-2014)

➤ **Ph.D. THESIS UNDER HIS SUPERVISION:**

S. No.	Name of the Ph.D. Scholar	Title of the thesis & Year	Present position of the Scholar
1	K. Nakkeeran	Solitons in Resonant and Nonresonant Optical Fibre Media (1998)	Lecturer Department of Engineering, Fraser Noble Building, King's College, University of Aberdeen, AB24 3UE, United Kingdom
2	T. Alagesan	Soliton Aspects of Some Nonlinear Systems (1999)	Assistant Professor Department of Physics Presidency College Chennai – 600 001
3	A. Uthayakumar	Soliton Aspects of Some Inhomogeneous Nonlinear Systems (2000)	Assistant Professor Department of Physics Dr. Ambedkar Govt Arts College Chennai – 600 039
4	A. Mahalingam	Solitons in Some Nonlinear Optical Problems (2001)	Assistant Professor Department of Physics Anna University Chennai – 600 025
5	K. Senthilnathan	Soliton Type Pulse Propagation Through Nonlinear Periodic Structures in Fiber and other Waveguides (2004)	Assistant Professor Department of Physics Vellore Institute of Technology Vellore
6	P. Seenuvasakumaran	Optical Solitons in Nonlinear Fibre Optics (2005)	Assistant Professor Department of Physics Muthurangam Govt. Arts College Vellore
7	P. Shanmughasundaram	Solitary Wave Solutions of Some Systems in Nonlinear Fiber Optics (2005)	Assistant Professor Department of Physics Govt Arts College Virudhachalam
8	R. Murali	Soliton and Modulation Instability in Bose Einstein Condensates (2010)	Assistant Professor Department of Physics Vellore Institute of Technology Vellore
9	B. Kalithasan	Soliton Propagation in Resonant and Nonresonant Optical Fibers (2010)	Department of Physics, Chennai Institute of Technology, Chennai, Tamil Nadu
10	Ancemma Joseph	Pulse Propagation, Instability and Solitons: A theoretical approach to nonlinear wave dynamics in negative index materials (2012)	Department of Physics Pondicherry University Pondicherry – 605 014
11	R. Vasantha Jayakantha Raja	Solitons in Photonic Crystal Fiber (2012)	Department of Physics, Central University of Tamil Nadu, Thiruvavur

At present, supervising FIVE Ph.D. students

➤ **Collaboration With**

S.No	Name of the Collaborator	Area of Collaboration
1	Prof. Akira Hasegawa Himeji Dokkyo University and Soliton Communications 43, 19-1 Awataguchi Sanjobocho Higashiyama, Japan E mail: hasegawa@solitoncomm.com , soliton@canvas.ne.jp	Solitons in Dispersion and Nonlinear Management Fiber
2	Prof.V.N.Serkin Universidad Autonoma de Puebla Pue.,Puebla, 72000, Mexico E mail: vserkin@yahoo.com	Solitons in Dispersion and Nonlinear Management Fiber
3	Prof. J. Herrmann Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Max-Born-Str. 2a, D-12489 Berlin, Germany E mail: jherrman@mbi-berlin.de	Photonic Crystal Fiber
4	Prof. P.T. Dinda Laboratoire de Physique de l'Universite de Bourgogne 21078 Dijon, France E mail: Patrice.Tchofo-Dinda@u-bourgogne.fr	Modulational Instability in Fibers
5	Prof. B. Malomed Department of Interdisciplinary Studies The Iby and Aladar Fleischman Faculty of Engineering, Tel Aviv University Ramat Aviv 69978 , ISRAEL E mail: malomed@eng.tau.ac.il	Soliton and Modulational Instability in Periodic, Nano Structures and Nonlinear Couplers
6	Prof. A. Biswas, Department of Applied Mathematics and Theoretical Physics, Delaware State University, Dover, USA E mail: biswas.anjan@gmail.com	Soliton Radiation in Fibers
7	Prof. Timoleon C. Kofane Department of Physics, Faculty of Science, University of Yaounde I, P.O. Box. 812, Cameroon E mail: tckofane@yahoo.com	Solitons and MI in Nonlinear Fibre Optics and BECs
8	Prof. Jie-Fang Zhang, Institute of Nonlinear Physics, Zhejiang Normal University, Zhejiang, P.R.China E mail : jf_zhang@zjnu.cn	Solitons in Graded Index Fibers
9	Prof. Jingsong He Department of Mathematics, Ningbo University, Ningbo, 315211, P.R. China E mail: hejingsong@nbu.edu.cn	Solitons and Rogue waves in Nonlinear Fibre Optics
9	Prof. V. C. Kuriakose Department of Physics Cochin University of Science & Technology Kochi – 682 022 E mail: vck@cusat.ac.in	Solitons in Fibers and Bulk Materials
10	Prof. Prasanta K. Panigrahi Indian Institute of Science Education and Research (IISER) Kolkata, Salt Lake, Kolkata 700106, India E mail: prasanta@prl.res.in	Dispersion Management Solitons and BECs
11	Dr.P.Muruganandam Department of Physics Bharathidasan University Tiruchirapalli – 620 024 E mail : murganand@gmail.com	Solitons in Bose Einstein Condensates

➤ **HONOURS/AWARDS/OTHER RECOGNITION RECEIVED**

1. **Chairman**, SERC School on Nonlinear Dynamics, Department of Science and Technology, Government of India (2012-2016)
2. **Member**, Editorial Board, Optics and Photonics Journal (USA) and Journal of Photonics and Optoelectronics (Hong Kong)
3. **Fellow**, Indian Academy of Sciences, Bangalore (2012)
4. **Member**, New Millennium Indian Technology Leadership Initiative (NMITLI), CSIR (2011)
5. **INSA International Exchange Fellowship** (May-August 2000, May-July 1995 & May- August 2004, 2008-2009, 2011-2012)
6. **Incoming Fellowship** by European Union to visit Gdansk University, Poland (2010)
7. **Member, FIST**, Department of Science and Technology, Government of India (2009-Present)
8. **Member**, DST Planning Committee on Nonlinear Dynamics and Wave Guide Optics Activities in India (2010-2011)
9. **Ramanna Fellowship**, Department of Science and Technology, Government of India (July 2006 – June 2009)
10. **Programme Advisory Committee (PAC) Member**, Department of Science and Technology, Government of India (July 2004 - Present)
11. **Research Award**, University Grants Commission (May 2004- April 2007)
12. **Sathya Murthy Memorial Award** for the Year 1997, Indian Physics Association (1998)
13. **Anil Kumar Bose Memorial Award**, Indian National Science Academy(1998)
14. **Regular Associateship Award**, ICTP, Italy (May 1997 - April 2004)
15. **AICTE Career Award** for Young Teachers (February 1998- January 2000)
16. **Fellow of the Tamil Nadu Academy of Sciences**
17. **Indian National Science Academy Young Scientists Medal** (1995)
18. **Junior Associateship Award**, ICTP, Italy (May 1995 - April 1997)
19. **DAAD Post Doctoral Fellow** (May 1995 - April 1997)
20. Included in “*The International Directory of Distinguished Leadership*”; “*Outstanding Five Thousand Personalities of the World*”; “*Personality of the Year-’98*”; “*Marquis Who’s Who ‘01*”; “*Who’s Who in Asia*”, “*Who’s Who in Science & Technology ‘07* & *Who’s Who in Science & Technology ‘11*”.
21. **DST SERC Young Scientists Project Award** (1992-1995)
22. **Referee**, *American Physical Society Journals, USA; Institute of Physics Journals, UK; Europhysics Letters, Switzerland; International Journal of Nonlinear Mathematical Physics, Sweden; Physics*

Letters A, North- Holland; *Optical Society of America Journals, USA* ; European Journal of Physics and *Pramana*, India

23. *Nominated by DST to represent Young Scientists* in the Indian Science Congress Meetings 1995 & 1996
24. *Resource Person* - UGC Refresher Courses for College Teachers – Bharathiyar University (2006); University of Madras (1994, 1998, 1999, 2001 & 2004); Pondicherry University (2001 & 2004-2006,2008); Annamalai University (2001); Cochin University (2001); Bharathidasan University (2002, 2004 & 2005 & 200, 2008) and University of Delhi (1995)
25. *Speaker*, Theoretical Physics Seminar Circuit (1994 ,1999-2010)
26. *CSIR Senior Research Fellowship* (1988) & *Research Associateship* (1992)
27. *Invited Speaker* in many National and International meetings

➤ **SUMMARY OF THE RESEARCH CONTRIBUTION BY Prof.K.PORSEZIAN**

Prof K. Porsezian (KP) has been one of the most active workers in the area of Nonlinear Dynamics and is investigating the soliton and modulation instability (MI) aspects encompassing magnetic systems, nonlinear fiber optics, bulk materials, photonic crystal fibers, Bose-Einstein condensates, metamaterials and related areas. His investigations have advanced the state of knowledge in the subject considerably and contributed to the better understanding of application of the concept of soliton and MI in the above areas.

Contribution to Magnetic Systems

KP has investigated the dynamics of Heisenberg Ferromagnetic spin chain including the effect of discreteness of lattice in the classical continuum limit. He showed that the discreteness effects in higher orders destroyed lower order coherent structures and demonstrated that solitons were possible only for specific choices of biquadratic parameters [2]; Improved upon the earlier models with a new soliton possessing discrete magnetic system [3]; Showed that site dependent and radially symmetric magnetic systems admitted solitons; but only when suitable inhomogenities are added [4,7].

Contribution to Nonlinear Fiber Optics and other Areas of Physics

Considering the higher order optical effects, Porsezian explored the soliton propagation and MI conditions in both resonant, nonresonant and birefringent fibers BEC, metamaterials and bulkmaterials and proposed several soliton models and new novel ideas in MI, which find applications in optical communication and the soliton propagation in birefringent fiber with all the above higher order effects[12,16-24,29,45-116]. He analyzed the influence of initial phase modulation on soliton-soliton interaction in a lossy fiber [50, 51, 56] and also elucidated the condition under which MI sets in, in the presence of SRS [67]. Using projection operator method, he investigated the dynamics of femtosecond pulse propagation through the birefringent fiber and observed that the impact of SS and SRS scattering on chirp of the pulses decreases/increases in AD/ ND regime [93].

KP's most noteworthy contribution is the prediction of suitable dispersion map forms under the complete suppression of soliton-soliton interaction scenario [80,90,105]. He demonstrated a novel pulse amplification technique, based on exact multi solitons interacting with variable dispersion, nonlinearity and gain or loss and with the inclusion of SRS [82]. Further, soliton dispersion management and self-similar solutions pertaining to the effect of varying dispersion with external harmonic oscillator potential for chirped solitons have been investigated with emphasis on the various aspects of dispersion profiles and obtained many novel results [90,92,96]. He demonstrated a novel pulse compression technique based on exact soliton solutions to nonlinear Schrödinger type equations interacting with a source, variable dispersion, nonlinearity and gain or loss [69,73].

KP obtained new type of Dark-in-the-Bright solution also called dipole soliton for the higher-order nonlinear Schrödinger (HNLS) equation with non-Kerr nonlinearity and investigated the stability of the solitary wave solution under some initial perturbation on the parametric conditions. He investigated the exact analytical self-similar bright - and dark optical solitary wave solutions of the nonlinear Schrödinger equation with localized inhomogeneous cubic-quintic nonlinearity by employing some new type of similarity transformation where one can compress and amplify the bright- and dark solitons of the inhomogeneous cubic-quintic nonlinear Schrödinger equation to a desired width and amplitude in a controllable manner[].

KP obtained the MI conditions required for the evolution of USPs in an asymmetric dual-core fiber and also investigated the ensuing nonlinear evolution of pulses in the ND regime and a regular chain of stable bright solitons in the AD regime which can be used as a source of RZ pulses for optical telecommunications [75]. He investigated the MI of symmetric and asymmetric CW solutions with the constant amplitude of two linearly coupled complex Ginzburg-Landau equations with the cubic-quintic nonlinearity, which explains a laser based on a dual-core fiber [87]. KP investigate the dynamics and steering characteristics of optical pulse propagation at 850 nm through photonic crystal fiber (PCF) using the projection operator method (POM), where the propagation of Gaussian pulse in the twin core fiber is analyzed using CNLSE. The efficient switching of different liquid filled system is analyzed[149].

By considering the influence of dispersion up to the sixth order on the scalar MI process of ND and AD fiber, he elucidated the dichotomy between the odd order and even order dispersion terms in their influence on the MI and demonstrated that independent consideration of each even order dispersion leads to the increase in spacing between the side bands and the gain spectrum is dominated by the influence of second and fourth order dispersion effects. In the ND regime, MI occurs only for negative value of fourth order dispersion and analyzed the interrelation of SRS and MI [78]. By means of a technique based on average dispersion decreasing dispersion managed fibers, achieved both a complete suppression of the side band frequency shifts and a fine control of the MI frequencies, without any compromise in the MI power gain [84]. He demonstrated that a fiber with periodically varying dispersion can substantially improve the power gain of nonconventional sidebands induced by periodic fluctuation of dispersion [89]. KP investigates the unconventional MI process like the generation of new MI bands under the impact of higher

order dispersion. The significant of those is the investigation of MI under the non-instantaneous nonlinear response and saturation of nonlinearity, where new MI spectral bands with infinite bandwidth are observed.

KP investigated the existence of bright and dark solitons in coupled photorefractive media [66]. Propagation of light beam with cubic-quintic (CQ) nonlinearity has been studied both analytically and numerically, both being in excellent agreement. The existence of stable light bullets in a medium with CQ nonlinearity and self-defocusing effect of free electrons due to plasma formation has been proved [70]. He demonstrated numerically that the three-dimensional spinning solitons are unstable and the multiphoton ionization effect may stabilize the spinning light bullets in the CQ model [79]. He proposed and investigated, using numerical simulation and experimental technique, the evolution of beam through a directional coupler formed in a photopolymer system [94,97]. Considering pulse propagation in fiber Bragg grating (FBG), explained the symmetry breaking instability and optical switching [59,61-63]. The condition for MI in nonlinear management (NM) FBG were demonstrated and arrived at two main results: (i) MI occurs only for finite values of the total input power for both AD and ND regimes; and (ii) The gain spectrum changes profusely for comparatively smaller and comparatively larger values of the NM coefficient [67,72,74]. The conditions for the occurrence of cross-phase MI in the ND regime, which occurs as a result of group velocity mismatch between the linearly polarized eigenstates, are determined. He also explored the MI conditions for nonlinearity management through dynamic Bragg grating and investigated the existence of gap soliton solutions through MI [98].

KP analyzed the MI of two components of Bose – Einstein condensates in a quasi one-dimensional geometry[71] and investigated the MI of steady state solutions with constant amplitude in the model of averaged coupled GP equations under the Feshbach resonance management [87,95,106]. KP successfully analyzed the MI in Spinor BECs . A detailed analytical and numerical treatment of Modulational instability in F=2 spinor condensate is presented and the spin-mixing dynamics during evolution of the spinor condensate is dealt [134].

KP investigated the influence of linear and nonlinear effects in PCF for different air hole size and successfully demonstrated the generation of higher order solitons in PCF near the visible wavelength regime [85,118,119]. Also the existence and stability of solitons on the background of a continuous wave and conditions for MI in negative index material [100, 111,117] have been investigated. The most notable contribution of KP is the analysis of supercontinuum generation using Soliton Fission and Modulational Instability [137,140]. By making use of the well – known MI, he went beyond the scope of ordinary MI process and identifies the evolution of SCG from MI. The most significant of all is the investigation of Instability induced SCG in saturable nonlinear media. Apart from saturable nonlinear media KP also analyzed intensively the effect of slow nonlinear response in the liquid filled PCF, where fiber design and the calculation of fiber parameters are analyzed systematically [100,111,117,137,140]. He also investigate the efficient pulse compression at 850 nm in tapered PCF [123].

LIST OF PUBLICATIONS

A. In International Journals:

S. No	Names of all the authors	Title of the paper	Name of the journal, volume, page and year	No. of Citations	Impact Factor 2010
1.	K. Porsezian, K.M.Tamizhmani and M.Lakshmanan	Geometrical Equivalence of a Deformed Heisenberg Spin Equation and the Generalized Nonlinear Schrödinger Equation	Phys. Lett. A, 124 , 159-160 (1987).	9	1.963
2.	M.Lakshmanan, K.Porsezian and M.Daniel	Effect of Discreteness on the Continuum Limit of the Heisenberg Spin Chain	Phys. Lett. A, 133 , 483-488 (1988).	4	1.963
3.	K.Porsezian and M.Lakshmanan	Discretized Hirota Equation, Equivalent Spin Chain and Bäcklund Transformation	Inverse Problem, 5 , L15-19(1989).	7	
4.	M.Lakshmanan, and K.Porsezian	Planar Radially Symmetric Heisenberg Spin System and Generalized Nonlinear Schrödinger Equations: Gauge Equivalence, Bäcklund Transformations and Explicit Solutions	Phys. Lett. A, 146 , 329-334 (1990).	9	1.963
5.	K.Porsezian	Bäcklund Transformations and Explicit Solutions of Certain Inhomogeneous Nonlinear Schrödinger Type Equations	J. Phys. A, 24 , L337-343 (1991).	12	1.641
6.	K. Porsezian, M. Daniel and R. Bharathikannan	Generalised x-Dependent Hirota Equation: Singularity Structure, Bäcklund Transformation and Soliton Solutions	Phys. Lett. A, 156 , 206-210 (1991).	5	1.963
7.	K. Porsezian and M. Lakshmanan	On the Dynamics of the Radially Symmetric Heisenberg Ferromagnetic Spin System	J. Math. Phys., 32 , 2923-2928 (1991).	27	1.291
8.	K. Porsezian, M. Daniel and M. Lakshmanan	On the Integrability Aspects of the One Dimensional Classical Continuum Biquadratic isotropic Heisenberg Spin Chain	J. Math. Phys., 33 , 1807-1816 (1992).	28	1.291
9.	M. Daniel, K. Porsezian and M. Lakshmanan	On the Integrable Models of the Higher Order Water Wave Equation	Phys. Lett. A, 174 , 237-240 (1993).	2	1.963
10.	K. Porsezian and A. Uthayakumar	Singularity Structure Analysis and Hirota's Bilinearization of the Two Component BKP Hierarchy	Phys. Lett. A, 183 , 371-375 (1993).	3	1.963
11.	K. Porsezian	Painlevé Property of the Inhomogeneous Deformed Kaup System	Phys. Lett. A, 191 , 229-232 (1994).	3	1.963
12.	K. Porsezian, P. Shanmugha Sundaram and A.Mahalingam	Coupled Higher Order Nonlinear Schrödinger Equations in Nonlinear Optics: Painlevé Analysis and Integrability	Phys. Rev. E, 50 , 1543-1547(1994).	36	2.352
13.	M. Daniel, K. Porsezian and M. Lakshmanan	On the Integrability of the Inhomogeneous Spherically Symmetric Heisenberg Ferromagnet in Arbitrary Dimensions	J. Math. Phys., 35 , 6498-6510 (1994)	43	1.291
14.	K. Porsezian and P.Shanmugasundaran	Painlevé Property of the Inhomogeneous Coupled Nonlinear Schrödinger Equations	Chaos, Solitons & Fractals, 5 , 119-124(1995)	6	1.267
15.	K. Porsezian and T. Alagesan	Painlevé Analysis and Complete Integrability of Coupled Klein- Gordon Equations	Phys. Lett. A, 198 , 378-382 (1995).	11	1.963

16.	K. Porsezian and K. Nakkeeran	Optical Soliton Propagation in an Erbium Doped Nonlinear Lightguides with Higher Order Dispersion	Phys. Rev. Lett., 74 , 2941-2944 (1995).	35	7.621
17.	K.Nakkeeran and K. Porsezian	Solitons in an Erbium Doped Nonlinear Fiber Medium with Stimulated Inelastic Scattering	J. Phys. A , 28 , 3817-3823(1995)	15	1.641
18.	K. Porsezian and K. Nakkeeran	Solitons in Random Nonuniform Erbium Doped Nonlinear Fiber Media	Phys. Lett. A, 206 , 183-186 (1995).	11	1.963
19.	K. Porsezian and K. Nakkeeran	Optical Soliton Propagation in a Coupled System of the Nonlinear Schrödinger and the Maxwell-Bloch Equations	J. Mod. Opt. 42 , 1953-958(1995).	7	0.998
20.	K. Nakkeeran and K. Porsezian	Coexistence of a Self Induced Transparency Soliton and a Higher Order Nonlinear Schrodinger Soliton in an Erbium Doped Fibre	Opt. Comm., 123 , 169-174 (1996).	12	1.517
21.	K. Nakkeeran and K. Porsezian	Optical Solitons in an Erbium Doped Nonlinear Fiber Medium with Higher Order Dispersion and Self Steepening	J. Mod. Opt., 43 , 693 -699 (1996).	3	0.998
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139.	C.G. Latchio Tiofack, Alidou Mohamadoua,, Alim, K. Porsezian and Timoleon C. Kofane	Higher Order Dispersion effect in Nonlinear metamaterials with saturable nonlinearity	To appear in Journal of Modern Optics		
140.	C.G. Latchio Tiofack, Alidou Mohamadoua,, K. Porsezian and Timoleon C. Kofane	Ultra short Electromagnetic Pulse Propagation in Optical Fibres	Submitted to Optics Communications		
141.	Amitava Choudhuri and K. Porsezian ,	New form of Optical Solitary Wave Solutions of Higher Order Nonlinear Schrodinger Equation with Non-Kerr Terms	Submitted to Phys.Rev.A		
142.	Amitava Choudhuri and K. Porsezian ,	Optical Rogue Wave Similaritons in Nonlinear Fibre Optics	Submitted to Phys.Rev.A		
143.	R.Nithyanadam ,	Investigation of Modulational Instability	Submitted to J.Optics.A		

	R. Vasantha Jayakantha Raja, and K.Porsezian	Induced Supercontinuum Generation with Saturable Nonlinear Response			
144.	T.Mithun and K. Porsezian	Dynamics of Soliton Matter Waves in trapped BEC with time dependent two and three body interaction	Submitted to Phys.Rev.A		
145.	T.Mithun and K. Porsezian	Effects of Modulation Instability on F=2 Spinor Condensates	Submitted to Phys.Rev.Lett.		
146.	R.Nithyanadam , R. Vasantha Jayakantha Raja, and K.Porsezian	Instability Induced Supercontinuum Generation in various saturable nonlinear optical media	Submitted to Phys.Rev.Lett.		
147.	T.Mithun and K. Porsezian	Self-Similar Bright and Dark Solitons of Nonlinear Schrodinger Equation with Distributed Cubic-Quintic Nonlinearity	Submitted to Phys.Rev.A		
148.	Jingsong He, Shuwei Xu and K.Porsezian	Bright and Dark Rogue Breathers in a Resonant Erbium Doped Fibre System	Submitted to Physica D		
149.	Jingsong He, Shuwei Xu and K.Porsezian	Breather and Rogue Wave solution of Inhomogeneous Nonlinear Schrodinger Equation	Submitted to Physics Letters A		
150.	Jingsong He, Shuwei Xu and K.Porsezian	Investigation of Modulational Instability Induced Supercontinuum Generation with Saturable Nonlinear Response	Submitted to Phys.Rev.A		
151.	C.G. Latchio Tiofack , Thierry B.Ekogo, Alidou Mohamadoua,, K. Porsezian and Timoleon C. Kofane	Dynamics of Bright Solitons and their Collisions for the Inhomogeneous Coupled Nonlinear Schrodinger- Maxwell Bloch Equations	Submitted to Canadian Journal of Physics		
152.	Rangopal K.Porsezian and P. Tchofo Dinda,	Modulational Instability in A3DMF System with Saturable nonlinearity	Submitted to J.Mod.Opt		
153.	S. Sabari, K. Porsezian and P. Muruganandam	Study on the stabilization of attractive Bose-Einstein condensates using projection operator method	Submitted to J. Phys. B		
154.	A.Mahalingam, JR.Tamil Selvi, M.S.Mani Rajan and K.Porsezian	Nonautonomous Multi-Soliton Propagation in an Inhomogeneous Fiber Driven by External Potentials Using Darboux Transformation	Submitted to Physics Letters A		
155.	A. Labruyere, S.Ambomo, C.M. Ngabireng, P. Tchofo Dinda, K. Porsezian and R.Ganapathy	Polarization Modulational Instability in Fiber Systems with Birefringent and Stimulated Raman Scattering	To be Submitted		
156.		Modulational Instability in Relaxing Kerr Medium is Revisited : Competence of Higher Order Dispersion and Walk-off Effect on XPM			

B : List of papers published in Conferences /Symposia , etc.:

S. No.	Names of all the authors	Title of the paper	Name of the proceedings/Book, volume, year and page
1	M. Lakshmanan, K. Porsezian and M. Daniel	On the Nonlinear Dynamics of the one-dimensional Classical Heisenberg Ferromagnetic Spin Chain	549-558 (1990) in Nonlinear Evolution Equations: Integrability and Spectral Methods , A.P.Fordy, A.Degasperis and M. Lakshmanan (Eds.), Manchester Uni. Press, UK.
2	K. Porsezian	BT and Explicit Solutions for Homogeneous and Inhomogeneous Nonlinear Schrödinger Type Equation	ICTP Proceedings IC/92/265 (1992).
3	K. Porsezian	On the Discrete and Continuum Integrable Heisenberg Spin Chain Models	in Future Directions of Nonlinear Dynamics in Physical and Biological Systems , P.L.Christiansen et al(Eds), Plenum Press, 243-248 (1993).
4	K. Porsezian , M. Lakshmanan and M. Daniel	Integrability Aspects of Higher Order Nonlinear Schrödinger Equations in Nonlinear Optics	8th Workshop on Nonlinear Evolution Equations and Dynamical Systems , V.G.Makankov et al(Eds.), World Scientific Singapore, 436-443, (1994).
5	K. Porsezian and K. Nakkeeran	Optical Solitons in an Erbium Doped Fiber	Proceedings of National Laser Symposium, 156-157 (1995)
6	K. Porsezian and K. Nakkeeran	Optical Solitons in an Erbium Doped Fibers with Higher Order Nonlinearities	Ultra fast Processes in Spectroscopy '95 , Ed. by O. Svelto et. al., Plenum Press, 49-52 (1996).
7	K. Nakkeeran, P.K. Palanisamy and K. Porsezian	Two Orthogonally Polarised Optical Solitons in Fiber Media with all Higher Order Effects	Optics for Science and New Technology , J.S.Chang, et al (Eds.) SPIE vol. 2778 (1996).
9	P. Shanmugha Sundaram and K. Porsezian	Soliton Solutions of N-Coupled Higher Order Nonlinear Schrödinger Equation in Nonlinear Optics	Proceedings of the National Laser Symposium, 175-176, (1999).
10	K. Porsezian	Solitons in Resonant and Nonresonant Fibers	Proceedings of the National Laser Symposium, 419 -420 (1999).
11	P. Shanmugha Sundaram and K. Porsezian	Optical Solitons in Inhomogeneous NLS-MB System	Proceedings of the National Laser Symposium, 415 -416 (1999).
12	A. Mahalingam and K. Porsezian	Dark Solitons in Nonlinear Optical Fibers with Higher Order Effects in Single and Coupled Systems	Proceedings of the National Laser Symposium, pp 363-365 (2000).

13	K. Senthil Nathan, G. Narayanaswamy and K. Porsezian	Soliton Propagation in Birefringent Optical Fiber – Stokes Approach,	Proceedings of the National Laser Symposium, pp 366 – 368 (2000).
14	K. Punithavathy, K. Porsezian , S. Gnanasekaran and P. Seenuvasakumaran	Femtosecond Solitons in Nonlinear Fiber	Proceedings of the National Laser Symposium, pp 369-370 (2000).
15	K. Porsezian and L. Bharathi	Optical Soliton- Soliton Interactions- Photonic Logic Gates	Proceedings of the National Laser Symposium, pp 371-372 (2000).
16	P. Malathi, K. Senthilnathan and K. Porsezian	Dynamics of Nonlinear Pulse Propagation in Fiber Bragg Grating	Proceedings of the National Laser Symposium, pp 225-226 (2001).
17	M. Saravanapriya and K. Porsezian	Pulse Propagation in Nonlinear Couplers	Proceedings of the National Laser Symposium, pp 227-228 (2001).
18	G. Narayanasamy and K. Porsezian	Lie Symmetry Analysis of Maxwell – Bloch Equations	Proceedings of the National Laser Symposium, pp 229-230 (2001).
19	C. Rameshkumar, S. Gnanasekaran and K. Porsezian	Soliton in a Continuous Wave Background	Proceedings of the National Laser Symposium, pp 231-232 (2001).
20	K. Senthilnathan and K. Porsezian	Dynamics of Polarization and Double Well Duffing Oscillator in Birefringent Fiber	Proceedings of the National Laser Symposium, pp 233-234 (2001).
21	D. Vijay Emmanuel Muthiah and K. Porsezian	Soliton Pulse Compression in Nonuniform Birefringent Fibers	Proceedings of the National Laser Symposium, pp 235-236 (2001).
22	R. Gayathri and K. Porsezian	Analysis and Applications of Soliton Collisions	Proceedings of the National Laser Symposium, pp 237-238 (2001).
23	P. Seenuvasakumaran and K. Porsezian	Similarity Reduction of the Dark Hirota Equation in Nonlinear Optics	Proceedings of the National Laser Symposium, pp 259-260 (2001).
24	P. Ramesh Babu, K. Senthilnathan, V. Santhanam and K. Porsezian	Bright and Dark Bragg soliton Propagation in Fiber Bragg Grating	Proceedings on National Laser Symposium, Allied Publisher, pp 522-23 (2002).
25	K. Senthilnathan and K. Porsezian	Analysis of Motion of Photons and Gap solitons in Fiber Bragg Grating	Proceedings on National Laser Symposium, Allied Publisher, pp 524-25 (2002).
26	C. Ramesh Kumar, R. Mohan and K. Porsezian	Femtosecond Soliton in single and multi-channel system	Proceedings on National Laser Symposium, Allied Publishers, pp 526-27 (2002).
27	K. Porsezian	Completely Integrable Soliton Models in Resonant and Nonresonant Fibre Optics	PP 101-124 in Nonlinear Systems , R.Sahadevan and M.Lakshmanan (Eds.), Narosa Publishers, New Delhi
28	R. Ganapathy,	Soliton Dispersion Management	Proceedings on National Laser

	K. Porsezian and N. Serkin		Symposium, Allied Publishers, pp 419-420 (2003).
29	D. Vijay Emmanuel Muthiah and K. Porsezian	Numerical Study of Nonlinear Pulse Propagation in Bragg Grating Structure using Finite Difference Scheme	Proceedings on National Laser Symposium, Allied Publishers, pp 419-420 (2003).
30	K. Senthilnathan, R. Ganapathy and K. Porsezian	Generation of Ultra Short Pulses in Fiber Bragg Grating through Modulational Instability	Proceedings on National Laser Symposium, Allied Publishers, 433-434 (2003).
31	K. Senthilnathan, and K. Porsezian	Adiabatic Bragg Soliton Compression	Proceedings on National Laser Symposium, Allied Publishers, pp 435-436 (2003)
32	P. Ramesh Babu, K. Senthilnathan, K. Porsezian and V. Santhanam	Grating Solitons in Fiber Bragg Grating	Proceedings on National Laser Symposium, Allied Publishers, pp 437-438 (2003).
33	P. Seenuvasakumaran K. Senthilnathan, and K. Porsezian	Bright, Dark and Grey Solitons in Photorefractive Media	Proceedings on National Laser Symposium, Allied Publishers, pp 439-440 (2003).
34	P. Ramesh Babu, K. Senthilnathan, K. Porsezian , V. Santhanam and K. Ganesan	Solitons and Their impact in Optical Networks	Proceedings of the Asia Pacific Conference on Parallel and Distributed Computing Technologies - 2004, Allied Publishers Pvt. Ltd, PP 945-958
35	K. Porsezian and K. Senthilnathan	Solitons in Fiber Bragg Grating	Guided Wave Optical Components and Devices , B.P. Pal (Ed.), Elsevier (USA), 2005
36	B. Kalithasan and K.Porsezian	Cnoidal and solitary wave solutions of the coupled Higher order NLS equation in Nonlinear optics	Proceedings on National Laser Symposium, Allied Publishers, PP 415-417 , 2005
37	K. Senthilnathan, S. Devipriya and K. Porsezian	Modulation Instability In Fiber Bragg Grating With Non-Kerr Nonlinearity	Proceedings on National Laser Symposium, Allied Publishers, PP 427-429, 2005
38	P. Ramesh Babu, K. Senthilnathan and K. Porsezian	Self-induced transparency Bragg solitons in a fiber Bragg grating	Proceedings on National Laser Symposium, Allied Publishers, PP 642-644, 2005
39	R. Vasantha Jayakantha Raja and K.Porsezian	Discrete Modulational Instability In Photonic Crystals: A Statistical Approach	Proceedings on National Laser Symposium, Allied Publisher (2005)
40	P.Seenuvasakumaran, A. Mahalingam, T. Alagesan and K.Porsezian	Dark Solitons in N -coupled Higher Order Nonlinear Schrödinger Equations	Proceedings on National Laser Symposium, Allied Publishers, PP 440-441, 2005

41	R. Ganapathy, SR. Niranjana and K. Porsezian	Modulational instability conditions for a Dispersion Tailored fiber	Proceedings on National Laser Symposium, Allied Publishers, PP 645-646, 2005
42	R. Murali, K. Senthilnathan and K. Porsezian	Statistical approach of the modulational instability of the discrete self trapping equation in Bose-Einstein condensation	Proceedings on National Laser Symposium, Allied Publishers, PP 647-649, 2005
43	T. Soloman Raju and K. Porsezian	Solitary waves in a quasi-one- dimensional two-component Bose-Einstein condensates	Proceedings on National Laser Symposium, Allied Publishers, PP 656-657, 2005
44	P. Ramesh babu, K. Senthilnathan, K. Porsezian , V. Santhanam and A. Mahalingam	Simultaneous propagation of a SIT soliton and a Bragg soliton in a doped fiber Bragg grating	Proceedings on National Laser Symposium, Allied Publishers, PP 270-271, 2005
45	P. Seenuvasakumaran, K. Senthilnathan, K. Porsezian and A. Mahalingam	Self-induced transparency gap solitons	Proceedings on National Laser Symposium, Allied Publishers, PP 272-273, 2005
46	C.P. Jisha, V. C. Kuriakose and K. Porsezian	Spatial Solitons in Bulk Cubic and Quintic Media with Multiphoton Ionization Effect	Proceedings on National Conference on Nonlinear Systems and Dynamics, Allied Publishers, PP 104-107, 2005.
47	K. Porsezian , V.N. Serkin, A. Hasegawa, T.L. Belyaeva and R. Ganapathy	Optical Solitons in Dispersion Decreasing Fibers	ICOL 2005 Proceedings
48	C.P. Jisha, V. C. Kuriakose K. Porsezian and A. Subha	Photorefractive Polymeric Soliton	Proceedings on National Conference on Nonlinear Systems and Dynamics, Allied Publishers, PP 21-23, 2006.
49	R.Murali and K. Porsezian	Modulational instability of coupled Bose Einstein Condensation with three body interaction potential	Proceedings on National Conference on Nonlinear Systems and Dynamics, Allied Publishers, PP 29-32, 2006.
50	B. Kalithasan and K. Porsezian	Modulational instability of Perturbative Nonlinear Schrödinger Equation With Higher Order Dispersion	Proceedings on National Conference on Nonlinear Systems and Dynamics, Allied Publishers, PP 33-35, 2006.
51	V.N.Serkin, A. Hasegawa, T.L.Belyaeva, R. Ganapathy and K.Porsezian	Picosecond Optical Soliton Compression: Exactly Integrable Models	Proceedings of the 8 th International Conference on Laser and Fiber – Optical Networks Modeling , PP 195-197, June 2006 ISBN: 1-4244-0234-4

52	V.N.Serkin, A. Hasegawa, T.L.Belyaeva, K.Porsezian and R. Ganapathy	Optical Soliton Amplification in Fiber Optics Systems with Varying Dispersion	Proceedings of the 8 th International Conference on Laser and Fiber – Optical Networks Modeling , PP 309-312, June 2006 ISBN: 1-4244-0234-4
53	T.L.Belyaeva, R.Ganapathy A. Hasegawa, K.Porsezian and R. V.N.Serkin	Dispersion and Nonlinear Management for Femtosecond Optical Solitons	Proceedings of the 8 th International Conference on Laser and Fiber – Optical Networks Modeling , PP 421-423, June 2006 ISBN: 1-4244-0234-4
54	R.Vasantha Jayakantha Raja and K.Porsezian	Propagation properties of Photonic crystal fiber using fully vectorial effective index method	SWOP'06 Thiruchengodu
55	R.Murali and K. Porsezian	Modulational instability of two component Bose Einstein Condensation with three body interaction	SWOP'06 Thiruchengodu
56	R.Murali and K. Porsezian	Modulational instability of coupled Bose Einstein Condensation with three body interaction potential	Proceedings on 3 rd NCNSD Allied Publishers, PP 29-32, (2006)
57	R.Vasantha Jayakantha Raja and K.Porsezian	Pulse propagation in Photonic crystal fibers,	International Conference on recent advances in fiber optics and photonics,IIT-Roorkee,2006
58	Ancemma Joseph and K.Porsezian	Pulse propagation dynamics through Bragg grating structure- Projection Operator formalism.	PTLUPA6, IITMadras,2006
59	R.Vasantha Jayakantha Raja and K.Porsezian	Soliton pulse compression in photonic crystal fiber	International Conference on Recent developments in nonlinear dynamics,2007
60	B. Kalithasan and K. Porsezian	Solitary waves in erbium doped nonlinear optical fiber,	National Conference on New Horizons in Theoretical and Experimental Physics,2007
61	B. Kalithasan and K. Porsezian	Self-induced transparency solitary waves in doped nonlinear optical fiber	National Conference on Nonlinear Systems and Dynamics, Allied Publishers, 2007
62	R.Murali and K. Porsezian	Bright solitons on a cnoidal wave background for the inhomogeneous nonlinear Schrödinger equation	New Horizons in theoretical and experimental physics,2007
63	R. Vasantha Jayakantha Raja and K.Porsezian,	Generalized projection operator method to analyze the dynamical parameters of pulses in photonic crystal fiber	New Horizons in theoretical and experimental physics, Cochin, 2007

64	K.Porsezian and R.Vasantha Jayakantha Raja,	Pulse propagation in liquid filled photonic crystal fiber,	National conference on recent trends in optoelectronics and laser technology, Trivandrum, 2007
65	R.Murali and K. Porsezian	Modulational instability of Bose-Einstein condensates in optical lattices with Feshbach resonance management	National conference on recent trends in optoelectronics and laser technology, 2007
66	R.Murali and K. Porsezian	Soliton solution as a cnoidal wave background in Bose-Einstein condensation	Proceedings on 4 rd NCNSD, 2007
67	R.Murali and K. Porsezian	Periodic and stationary soliton solutions of the discrete complex cubic-quintic Ginzburg-Landau equation	International Conference on Recent developments in nonlinear dynamics, 2007
68	Ancemma Joseph and K. Porsezian,	Gap Solitons and Modulational Instability in Dynamic Bragg grating with nonlinearity management	Proceedings on National Conference on new horizons in theoretical and experimental physics, 2007
69	Ancemma Joseph and K.Porsezian	Propagation dynamics through nonlinearity management of fiber Bragg grating-Stokes parameter formalism	NCOL, Kerala University, 2007
70	R.Vasantha Jayakantha Raja and K.Porsezian	Collision of soliton in photonic crystal fiber	National conference on recent trends in optoelectronics and laser Technology, Trivandrum, 2007
71	Ancemma Joseph and K. Porsezian	Evolution of small amplitude solitons on the continuous wave pedestal in negative index materials	National Conference on physics of materials, Pondicherry University,2008
72	Ancemma Joseph and K. Porsezian	On the existence and stability of small amplitude solitons on a pedestal pertaining to negative index materials,	International Conference AOE, Shanghai, China,2008
73	R. Vasantha Jayakantha Raja and K. Porsezian	Numerical Investigation of Soliton Pulse Propagation in Photonic Crystal Fiber	International Conference AOE, Shanghai, China,2008
74	Ancemma Joseph and K. Porsezian	Existence of dark-ant dark solitons in negative index material	International Conference on Photonics, Indian Institute of Technology, 2008
75	Ancemma Joseph and K. Porsezian	On the existence and stability of small amplitude solitons on a pedestal pertaining to negative index materials	Proceedings of the Asia Optical Fiber Communication and Optoelectronic Exposition and Conference (China), art. no. 5348754, 30, October - 2 November 2008, Shangai, China
76	Ancemma Joseph and K. Porsezian	Evolution of small amplitude solitons on the continuous wave	Proceedings of the National conference on physics of materials

		pedestal in negative index materials	(NCPM), pp 23, 19-20 March 2008, Pondicherry University, Puducherry.
77	Ancemma Joseph and K. Porsezian	Role of nonlinear dispersion on modulational instability in negative index materials	International Conference of recent developments in nonlinear dynamics (RDND), 13-16 February 2008, Bharathidasan University, Tiruchirappalli, India.
78	Ancemma Joseph and K. Porsezian	On the influence of Dispersive permeability Effects over the Propagation Scenario in Negative index materials	Proceedings of the 4th National conference on Nonlinear systems and Dynamics (NCNSD), 3-5 January 2008, Physical Research Laboratory, Ahmedabad
79	K. Porsezian , Jie-Fang Zhang, Lei Wu, Lu Li and C. Finot	Interaction scenario of exact quasi soliton similariton	International Conference on Photonics, Indian Institute of Technology, 2008
80	T. Uthayakumar and K. Porsezian	Dynamics of nonlinear directional coupler in doped photopolymer	International Conference on Photonics, Indian Institute of Technology, 2008
81	R. Vasantha Jayakantha Raja, K. Porsezian and S. Sivabalan	Soliton Propagation In Liquid Filled Photonic Crystal Fiber	International Conference on Photonics, Indian Institute of Technology, 2008
82	R. Vasantha Jayakantha Raja, S.Sivabalan and K. Porsezian	Design and simulation for ultra high soliton pulse compression through photonic crystal fiber	International conference on wsof-Brazil-2008
83	R. Vasantha Jayakantha Raja, K. Porsezian , and S. Sivabalan	Soliton propagation in liquid filled photonic crystal fiber	Photonics-2008, IIT-Delhi, PM-68
84	R. Vasantha Jayakantha Raja and K. Porsezian	Numerical Investigation on Soliton Pulse Propagation in Photonic Crystal Fiber	Asia Optical Fiber Communication and Optoelectronic Exposition and Conference, OSA Technical Digest (CD) (Optical Society of America, 2008), paper SuK4.
85	R. Vasantha Jayakantha Raja, S. Sivabalan, and K. Porsezian	Design and Simulation for Ultra High Soliton Pulse Compression through Photonic Crystal Fiber	AIP Conf. Proc. 1055, 163 (2008)

86	S.Sabari, R.Vasantha Jayakantha Raja and K. Porsezian	Investigation of stability domain in Bose-Einstein condensates	International Conference on Cold Atoms and Ions 2010 (ICCIA10), pp-61 (2010)
87	K.Senthilnathan, R.Vasantha Jayakantha Raja, K.Porsezian , Samuel Olupitan and K.Nakkeeran	Generation of ultrashort pulses at 850 nm in a newly designed photonic crystal fiber	Progress in Electromagnetics Research Symposium (PIERS 10), page no. 413, July 2010, Cambridge, USA
88	K. Porsezian , R. Vasantha Jayakantha Raja, Anton Husakou and Joachim Hermann	The contribution of reorientational nonlinearity of CS ₂ liquid in supercontinuum generation	Proc. Page no. 106, Photonics – 2010, IIT- Guwahati
89	Abdosllam M. Abobaker, R.Vasantha Jayakantha Raja, K.Senthilnathan, K.Porsezian and K.Nakkeeran	Efficient Pulse Compression in Photonic Crystal Fibre at 850 nm	International Conference on Computer and Communication Engineering (ICCCE 2010), IEEE Proceedings, May 2010, Kuala Lumpur, Malasiya.
90	K. Porsezian , R. Vasantha Jayakantha Raja, Anton Husakou and Joachim Hermann	The contribution of reorientational nonlinearity of CS ₂ liquid in supercontinuum generation	Proc. SPIE 8173, 81731D (2010)
91	T. Uthayakumar and K. Porsezian	Switching dynamics of a two dimensional nonlinear couplers in a photopolymer - A Variational approach	Ninth DAE-BRNS National Laser Symposium (NLS-09), Paper number CP-06-29, January 13-16, 2010, BARC, Mumbai, India.
92	T. Uthayakumar and K. Porsezian	Dynamics of a nonlinear fiber couplers in presence of variable coupling coefficient	DAE-BRNS National Laser Symposium (NLS-19), December 1-4, 2010, RRCAT, Indore, India
93	T. Uthayakumar and K. Porsezian	Optical switching in a three core photopolymer nonlinear coupler – A projection operator approach	PHOTONICS-2010 International Conference on Fiber Optics and Photonics, Page No. 393, December 11-15, 2010, IIT, Guwahati, India.
94	T. Uthayakumar and K. Porsezian	Optical beam propagation through three core nonlinear coupler - A projection operator approach	XXXV Optical Society of India Symposium - International Conference on Contemporary Trends in Optics and Optoelectronics, January 17-19, 2010, IIST Thiruvananthapuram, India

95	T. Uthayakumar and K. Porsezian	A projection operator approach on dynamics of twin core fiber coupler	National Conference on Nonlinear Systems and Dynamics (NCNSD-2011), January 27-30, 2010, Bharathidasan University, Tiruchirapalli, India
96	T. Uthayakumar, R. Vasantha Jayakantha Raja, K. Nithyanandan and K. Porsezian	On the Propagation of Light through a Twin Core Photonic Crystal Fiber at 850 nm	Second International Conference on Trends in Optics and Photonics (IConTOP), Kolkata - India during December 7 - 9, 2011
97	K. Nithyanandan, R. Vasantha Jayakantha Raja, T. Uthayakumar and K. Porsezian	Modulational Instability in the Regime of Minimum Group Velocity Dispersion for a Relaxational Saturable Medium	Second International Conference on Trends in Optics and Photonics (IConTOP), Kolkata - India during December 7 - 9, 2011
98	K. Nithyanandan, R. Vasantha Jayakantha Raja, T. Uthayakumar, and K. Porsezian	Modulational Instability in Non-Instantaneous Saturable Nonlinear Medium	IONS Student Chapter of OSA, IIT Delhi, New Delhi, India, 01 - 02 December, 2011
99	T. Uthayakumar, R. Vasantha Jayakantha Raja, K. Nithyanandan, and K. Porsezian	Modeling and Switching Study Photonic Crystal Fiber Coupler at 850 nm	IONS Student Chapter of OSA, IIT Delhi, New Delhi, India, 01 - 02 December, 2011
100	K. Nithyanandan, R. Vasantha Jayakantha Raja, T. Uthayakumar, and K. Porsezian	Modulational instability in optical fibers near the zero dispersion point for a relaxational kerr medium	XXXVI OSI symposium on Frontiers in Optics and Photonics, IIT Delhi, New Delhi, India, 03 - 05 December, 2011
101	T. Uthayakumar, R. Vasantha Jayakantha Raja, K. Nithyanandan, and K. Porsezian	All-optical pulse switching in twin core photonic crystal fiber	XXXVI OSI symposium on Frontiers in Optics and Photonics, IIT Delhi, New Delhi India, 03 – 05 December, 2011
102	R. Vasantha Jayakantha Raja, K. Nithyanandan, T. Uthayakumar, and K. Porsezian	Supercontinuum generation under exponential saturable nonlinear response	XXXVI OSI symposium on Frontiers in Optics and Photonics, IIT Delhi, New Delhi India, 03 – 05 December, 2011

103	R. Vasantha Jayakantha Raja, K. Nithyanandan, T. Uthayakumar and K. Porsezian	Investigation of Supercontinuum generation by soliton fission with saturable nonlinear responses	DAE-BRNS NLS-20, A-04-008, Anna University, Chennai, India, January 9-12 (2012)
104	R. Vasantha Jayakantha Raja, T. Uthayakumar, K. Nithyanandan and K. Porsezian	Optical pulse switching through dual core photonic crystal fiber coupler	DAE-BRNS NLS-20, A-01-037, Anna University, Chennai, India, January 9-12 (2012)
105	K. Nithyanandan, R. Vasantha Jayakantha Raja, T. Uthayakumar, and K. Porsezian	Role of Exponential saturable nonlinearity and higher order dispersion in the Modulational instability spectrum of a non-instantaneous nonlinear medium	DAE-BRNS NLS-20, A-04-009, Anna University, Chennai, India, January 9-12 (2012)
106	T. Uthayakumar, R. Vasantha Jayakantha Raja, K. Nithyanandan, and K. Porsezian	Gaussian steering characteristics of liquid filled twin core photonic crystal fiber coupler	DAE-BRNS NLS-20, A-01-038, Anna University, Chennai, India, January 9-12 (2012)

C. General Articles

1. Optical Solitons, K.Nakkeeran and **K.Porsezian**, Physics News, Indian Physics Association, **26**, 3-8 (1995).
2. Solitons in Optical Fiber Communication Systems, **K.Porsezian** and P.Sennuvasakumaran, Physics News, **30**, 5-18 (1999)

D. BOOKS / SPECIAL ISSUES EDITED

1. "**OPTICAL SOLITONS IN COMMUNICATIONS**" Tamil book, M. Arumugam and **K. Porsezian**, Anna University (April,2001)
2. "**OPTICAL SOLITONS: THEORY AND EXPERIMENTS**" Indian Academy of Sciences, **K.Porsezian** and V.C.Kuriakose (Editors) (December 2001)
3. **K.Porsezian** and V.C.Kuriakose (Eds.) **OPTICAL SOLITONS – THEORETICAL AND EXPERIMENTAL CHALLENGES**, Lecture Notes in Physics, Vol.613, Springer - Verlag, Berlin, February (2003)
4. **K.Porsezian** and V.C.Kuriakose (Eds.) "**Solitons in Nonlinear Optics: Advances and Applications**", European Journal of Physics- Special Topics, Springer - Verlag, Berlin (2009)

Invited Lectures given/Scientific meetings attended in India and Abroad:

1. **Presented a paper** on '*Occurrence of Planar State in Anisotropic Heisenberg Spin Chains*', Symposium on Chaos and Turbulence, during 3-5 March, 1986, at Physical Research Laboratory, Ahmedabad.
2. **Presented a talk** on '*Chaotic Motion and Anisotropic Heisenberg Spin Chain*', 31st ISTAM Congress, during 24-27 October, 1986, at Jiwaji University, Gwalior.
3. **Invited lecture** on '*Nonlinear Excitations in the Ferromagnetic Spin Systems*', ICTP Workshop on Computational and Computer Oriented Studies on Solitons Systems, during 29-31 January, 1987, at Jadavpur University, Calcutta.
4. **Presented a talk** on '*On the Nonlinear Excitations in Heisenberg Spin Chain*', Symposium on Nonlinear Dynamics, during 27-18 November, 1987, at Bharathidasan University, Tiruchirapalli.
5. **Presented a paper** on '*Discretized Hirota Equation, Equivalent Spin Chain and Backlund Transformations*', International Workshop on Nonlinear Evolution Equations: Integrability and Spectral Methods, during 4-15 July, 1988, at Centre di Cultura, Como, ITALY.
6. **Presented a talk** on '*On the Dynamics of the Radially Symmetric Heisenberg Spin Chain*', Workshop on Symmetries and Singularity Structure Aspects of Nonlinear Dynamical Systems, during 29 November - 2 December, 1989, at Bharathidasan University, Tiruchirapalli.
7. **Invited lecture** on '*Solitons – An Introduction*', during April, 1991, at Indira Gandhi Centre for Atomic Research, Kalpakkam.
8. **Presented a talk** on '*Solitons in Magnetic Systems*', on 18 May, 1991, at the Institute of Mathematical Sciences, Chennai.
9. **Invited lecture** on '*On the Integrability of the Radially Symmetric Heisenberg Spin Chain*', Workshop on Nonlinear Waves and Turbulence, during 23-29 Dec, 1991, at Jawaharlal Nehru University, New Delhi.
10. **Invited lecture** on '*Integrability Aspects of Higher Order Nonlinear Schrödinger Equation in Nonlinear Optics*', 8th Workshop on Nonlinear Evolution Equations and Dynamical Systems, during 6-17 July, 1992, at Joint Institute for Nuclear Research, Dubna, RUSSIA.
11. **Invited lecture** on '*On the Discrete and Continuum Integrable Heisenberg Spin Chain Models*', Meeting on Future Directions of Nonlinear Dynamics in Physical and Biological Systems, during 23 July - to 1 August, 1992, at the Technical University of Denmark, Lyngby, DENMARK.
12. **Invited talk** on '*Solitons in Condensed Matter Physics*' in the Workshop on Condensed Matter, Atomic and Molecular Physics, during 14 August - 20 September 1992, at the International Centre for Theoretical Physics, Trieste, ITALY.
13. **Invited lecture** on '*On the Nonlinear Dynamics of the Discrete and Continuum Spin Systems*', on 20 September, 1992, at University of Rome, Rome, ITALY.
14. **Presented a talk** on '*Introduction to Solitons*', on May 22, 1994, at Institute of Physics, Bhuvaneshwar.
15. Attended Q.I.P. Summer School on '*Fractals in nature and their realization in Computer Vision and Computer Graphics*', during 2 - 8 May, 1994, at I.I.T. Kharagpur, Calcutta.

16. Attended SERC School on ‘Coherence and Correlations in Modern Optics and Quantum Physics’, during 23 January – 10 February, 1995, at Institute of Mathematical Sciences, Madras.
17. **Invited talk** on “*Solitons in Nonlinear Materials*”, DST SERC School on ‘School on Materials for Advanced Research and Technology’, during 3-17 October, 1997, at Anna University, Chennai.
18. **Invited lecture** on “*Solitons in Optical Communication*”, Indo-French Workshop on “Guided Wave Optics and Applications to Telecommunications” during 22-25 September, 1999, Nice, France.
19. **Invited talk** on “Optical Solitons in Communications”, Conference on Dynamical Systems: Recent Developments, during 4-6 Nov, 1999, at University of Hyderabad, Hyderabad.
20. **Invited lecture** on ‘*Solitons in Modern Communications*’, “International Conference on Lasers and Their Applications” 1-4 March, 2000, at St. Joseph’s College, Tiruchirapalli.
21. **Invited lecture** on ‘*Optical Solitons : Merits and Demerits*’, UGC National Workshop on “Advances in Materials Science Optics” on 31 March, 2000, at Cochin University of Science and Technology, Cochin.
22. **Invited lecture** on “*Completely Integrable Models in Nonlinear Optics*”, “Symposium on Recent Developments in Nonlinear systems”, during 14-16 February, 2001, at the Ramanujam Institute for Advanced Study in Mathematics, University of Madras, Chennai.
23. **Invited lecture** on ‘*Solitons in Fiber Bragg Grating*’, “Workshop on Nonlinear Optics” during 27 -28 February, 2001, at Cochin University of Science and Technology, Kochi.
24. **Invited lecture** on “*Femtosecond Solitons in Optical Fibers*”, Indo-French Seminar on Advanced Photonics, during 27-28 November, 2001, at the Indian Institute of Science, Bangalore.
25. **Invited lecture** on “*Solitons in Optical Fiber Communications*”, “DAE-BRNS National Laser Symposium - 2001”, during 19-21 Dec, 2001, at Centre for Advanced Technology, Indore.
26. **Invited lecture** on “*Fiber Optics and its Applications*”, National seminar on Recent Trends in Physics, on 17 December, 2002, at Department of Physics, Voorhees College, Vellore.
27. **Invited lecture** on “*Fiber Optics and its Applications*” on January 11, 2003, at Department of Physics, Voorhees College, Vellore.
28. **Tutorial Lecture** on “*Recent Trends in Fiber Optics*”, Workshop on “Photonics”, during 27-28 February, 2003, at Cochin University of Science and Technology, Kochi.
29. **Invited lecture** on “*Introduction to Nonlinear Materials*”, National Seminar on “Chemical Physics (NSCP-2003)”, during 10-11 March, 2003, at Annamalai University, Chidambaram.
30. **Invited lecture** on “*Fiber Optics and its Applications*” on 25 September, 2003, at Department of Physics, Sri Rama Krishna Mission Vidyalaya College of Arts Science, Coimbatore.
31. **Invited lecture** on “*Introduction to Optical Fiber Communication*”, National Seminar on “Interaction of Physics with Human Life (INPHLI-2003)” during 25-26 September, 2003, at Erode Arts College, Erode.
32. **Invited lectures** on “*Fiber Optic Communications*” and “*Solitons in Optical Fiber Communications*”, on 30 October, 2003, at Department of Physics, St. Joseph’s College of Arts Science, Cuddalore

33. **Key note Address** on “*Optical Networking through Solitons*”, on 23 January, 2004, at Department of Physics, Government Thirumagal mills College, Gudiyattam
34. **Invited Lecture** on “*Recent Trends in Optical Networks Through Solitons*”, on 24 January, 2004, at Department of Computer Science and Engineering, Vellore Institute of Technology, Vellore.
35. **Invited Lecture** on “*Fiber Optic Communications*” in National Conference on “Recent Advantages in Molecular Interactions (NCRAMI-2004)”, during 26-27 March, 2004, at P.S.G.College, Coimbatore.
36. **Invited Lecture** on “Optical Networks”, on 30 September, 2004, at Department of Computer Science and Engineering, Vellore Institute of Technology, Vellore.
37. **Invited Lecture** on “*Solitons in fiber-optic Communications*”, on 1 October, 2004, at Department of Physics, Vellore Institute of Technology, Vellore.
38. **Invited Speaker**, *Recent Trends in Optical Networks Through Solitons*, Indo-Japan Workshop on Crystal Growth and Applications of Advanced Materials for Optoelectronics, during 7-10 December, 2004, at Anna University, Chennai.
39. **Invited lecture** on “*Fiber Optics and its Applications*”, on 20 December, 2004, at Department of Physics, Kongunadu Arts and Science College, Coimbatore
40. **Invited lecture** on “*Fiber Optics: Revolution and Applications*”, on 21 December, 2004, at Department of Physics, N.G.M. College Arts and Science, Pollachi
41. **Invited lecture** on “*Completely Integrable Soliton Models in Resonant and Nonresonant Optical Fibers*”, National Seminar on “Recent Trends in Nonlinear Differential Equations”, during 22-23 December, 2004, at Sri G.V.G. Visalakshi College for women, Udumalaipet.
42. **Invited lectures** on “*Nonlinear Fiber Optics*” and “*Optical Fiber Communications*”, National Seminar on “Gravity and Light”, during 14-15 January, 2005, at Cochin University of Science and Technology, Kochi.
43. **Invited lecture** on “*Fiber Optics and its Applications*”, on 19-20 January, 2005, at Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam
44. **Invited Lecture** on “*Solitons and their impact in Optical networks*”, “International Conference on SpectroPhysics (INCONS 2005)”, during 9-12 February, 2005, at Department of Physics, Pachaiyappa’s College.
45. **Invited Lecture** on “*Solitons in fiber optic Communication*”, on 19 February, 2005, at Department of Physics, Vivekananda College of Arts and Science for Women, Thiruchengodu.
46. **Invited Lecture** on “*Solitons in fiber-optic Communications*”, during 3-5 March, 2005, at Department of Electronics and Communication Engineering, Vellore Institute of Technology.
47. **Invited Lecture** on “*Solitons in fiber-optic Communications*”, “Recent trends in Condensed Matter Physics”, during 17-19 August, 2005, at V.V.Vanniyaperumal College, Virudhunagar.
48. **Invited lecture** on “*Optical solitons in Dispersion Decreasing Fibers*”, on 28 June, 2005, at Laboratoire de Physique de la Matière Condensée, at University of Nice, Nice.
49. **Invited lecture** on “*Basics of Nonlinear Optics*”, on 25 August, 2005, at Periyar University, Salem.

50. **Invited lecture** on “*Nonlinear Materials in Modern Technology*” in “National Symposium on Crystal Growth and Characterization”, during 29-30 September, 2005, at Department of Physics, Lyola College, Chennai
51. **Key note address** and **Invited Talk** on ‘*Solitons and Modulational Instability in Fiber Optics*’, SPIE meeting, on 10 November, 2005, at Cochin University of Science and Technology, Kochi.
52. **Invited lecture** on “*Optical Solitons in Dispersion Management Fibers*”, during 2-3 December, 2005, in “National Conference on Exciting Physics of this Decade” at Department of Theoretical Physics, University of Madras, Chennai.
53. **Resource person** : “ *Nonlinear Optics : Applications* ”, during December, 2005, in a series of lectures at the Refresher Course at Pondicherry University, Pondicherry.
54. **Resource person**: ‘*Optical Solitons : Applications*’ DST SERC School on “Nonlinear Dynamics”, during 4-24 January, 2006, at Pondicherry University, Pondicherry.
55. **Invited lecture** on “*Nonlinear Optics: Applications*”, in a series of lectures refresher course, on 25 January, 2006, at Bharathidasan University, Tiruchirappalli.
56. **Invited lecture** on “*The Role of Nonlinear Materials in Modern Technology*” in a series of lectures at the Refresher Course, on 31 January, 2006, at Pondicherry University, Pondicherry.
57. **Chairman**, “National Conference on Nonlinear Systems and Dynamics”, during 6-8 February, 2006, at Ramanujan Institute for Advanced Study in Mathematics, University of Madras, Chennai.
58. **Invited speaker** on “*The Role of Nonlinear Optical effects in Modern Technology*”, national conference on “Subtle world of Physics”, on 9 February, 2006, at Department of Physics, Vivekananda College of Arts and Science for Women, Thiruchengodu.
59. **Invited Lecture on** ‘*Recent Trends in Nonlinear Optics*’, on 9 March, 2006, at Department of Physics, Madura College, Madurai.
60. **Invited Lecture on** ‘Fiber optic sensors and their applications’, during 29-31 August, 2006, at International school of photonics, Cochin University.
61. **Resource Person** in the refresher course on “*Nonlinear Optics: Applications*”, on 11 September, 2006, at Bharathiar University, Coimbatore.
62. **Invited Lecture on** ‘Introduction to *Nonlinear optics*’, during 29-30 September, 2006, at Christ College, Irinjalakuda, Thrissur.
63. **Invited Lecture on** ‘*Fiber optics communications*’, on 12 October, 2006, at Department of Physics, Kanchi Mamunivar Center for Post Graduate Studies, Puducherry.
64. **Invited Lecture** in the one day seminar on ‘**Theoretical Physics**’, on 30 October, 2006, at Department of Physics, Mahathma Gandhi Arts College, Mahe.
65. **Invited Lecture** on ‘*Dispersion and Nonlinear Management Solitons in Optical Fibers*’ in PHOTONICS 2006, during 13-16 December, 2006, at University of Hyderabad, Hyderabad.
66. **Invited Speaker** in the National Seminar on ‘*Revolutions in Communications*’, during 25-27 January, 2007, at Department of Physics, Jain College for Women, Vaniyambodi
67. **Resource Person in the AICTE FIP programme for college teachers on** ‘*Nano photonics*’, during 25-27 January, 2007, at Department of Physics, Anna University.

68. **Invited Lecture on** ‘*Nonlinear optics and its Applications*’, Workshop on “Nonlinear Dynamics”, during 9-10 February, 2007, at Government Arts College, Coimbatore.
69. **Resource Person** in the refresher course, during 28 January – 19 February, 2007, at Bharathidasan University, Tiruchirapalli.
70. **Invited Lecture on** ‘*Fiber optics communications*’, on 22 February, 2007, at Bharathidasan Women’s college, Puducherry.
71. **Invited Lecture on** “Recent trends in *Nonlinear Optics*”, Workshop on “Recent Trends in Nonlinear Optics”, during 27-28 February, 2007, at International School of Photonics, Cochin University of Science and Technology, Kochi.
72. **Inaugural address on** ‘*Facts about India & Revolutions in communication*’, science day celebration, during 28 February - 2 March, 2007, at Sri Vidhya Mandhir College of Arts and science, Uthankarai.
73. **Invited Lecture on** “Optical Solitons and Modulational Instability in Nonlinear Fiber Optics ”, National Conference on “Lasers and Applications”, during 9-11 April, 2007, at Department of Physics, University of Kerala, Trivandrum.
74. **Invited Lecture on** “*Revolutions in Communications*”, National Workshop on “ BRAINY 2007, 6th April, 2007, at A.V.C. Engineering College, Mailaduthurai.
75. **Invited Lecture on** “ Optical Solitons in Photonic Crystal Fibers” during October 8-10,2007 at the National Seminar on New Horizons in Theoretical and Experimental Physics, Cochin University of Science and Technology, Kochi.
76. **Invited Lecture on** “Recent trends in *Nonlinear Materials*”, National Seminar on “Recent Trends in Materials Science”, on January 10, 2008, at Saradha College, Salem.
77. **Key Note Address**, Science Day Celebrations, Rajiv Gandhi College of Engineering and Technology, on 28th February, 2008
78. International Conference on **Nonlinear Dynamics**, during 13 February – 16 February, 2008, at Bharathidasan University, Tiruchirapalli.
79. **Inaugural address on** ‘*Optical Fiber Communication: Past, Present and Future,*’, Science Day Celebration, during 28 February – 1 March, 2008, at Sri Vidhya Mandhir College of Arts and Science, Uthankarai.
80. **Invited speaker** in the National Seminar on “ Recent Trends in Optical fibre Communications“ at Department of Physics, Jain College for Women, Vaniyambodi on 1st March 2008
81. Special Lecture on Solitons in Communications at Department of Physics, Sekar Arts College, Thirupattor on 28 February, 2008
82. Delivered an **inaugural address** on the topic “The present day trends in communication”, in the Department of Physics function held on 29th August 2008 at Tagore Arts College, Pondicherry.
83. **Invited speaker** in the National Seminar on “ Nonlinear Materials“ held at Department of Physics, National College, Tiruchirapalli during October 24-27, 2008

84. Delivered an **invited talk** in the National Seminar on “Recent Trends in Physics”, held on 29th January 2009 at Dept. of Physics, Marudhar Kesari Jain College for Women, Vaniambodi, Tamilnadu.
85. Delivered a **special lecture** in the physics association meeting on the topic Introduction to Optical Fibre Communications, held on 29th of January 2009 at Sacred Heart College, Thirupathur, Vellore, Tamilnadu.
86. **Key Note Address**, Science Day Celebrations, Manakula Vinayagar Institute of Technology, on 28th February, 2009
87. **Invited speaker** in the Regional Seminar on “Nonlinear Physics” held at the Department of Physics, Bharathidasan University, Tiruchirapalli during 27-28 March 2009
88. Delivered an **invited talk** in the National seminar on Recent Advancements in Materials and Energy, held on 6th March 2009 at Dept. of Physic, Voorhees College, Vellore, Tamilnadu.
89. TPSC Convener and **invited speaker** in the TPSC National workshop on **Recent Advancements in Theoretical Physics and Quantum Computation** held at the Department of Physics, NGM College Pollachi during 17-19, March 2009
90. Delivered an **invited lecture** on the topic “Nonlinear Optics: an overview”, in the seminar on Frontier Topics in Fundamental Physics, held during 30th, 31th March 2009 at Centre for nonlinear dynamics, Bharathidasan University, Tiruchirapalli, Tamilnadu.
91. Special Lecture on “ **Research and Development Activities in India**” at Sri Manakula Vinayagar College of Engineering and Technology, on 28th February, 2009
92. **Invited speaker** and Key Note Address in the AICTE workshop on “Optical Fibre Communications” on 10th December 2009 at National Engineering College, Kovilpatti.
93. **Resource Person** in the refresher course, during 28 January – 19 February, 2010, at Madurai Kamaraj University, Madurai.
94. **Invited speaker** in the Regional Seminar on “Recent Trends in Material Sciences” held at the Department of Physics, Government Arts College, Tiruvannamali during 26-27 February 2010
95. **Key Note Address and Invited talk** on “ Communications: Fast, Present and Fast” in the regional level seminar on Nanophotonics held at Department of Physics, Thiyagaraja Arts College, Madurai on 10th March 2010.
96. **Resource Person** in the refresher course on Material Science held at Pondicherry University, Puducherry on 3rd March 2010
97. **Invited speaker** on “ Linear and Nonlinear Optical Effects: Recent Applications” in the National workshop on Recent Trends in Advanced Energy Materials held at the School of Physics, Alagappa University, Karaikudi during 10-11, March 2010
98. Delivered an **inaugural address** on the topic “The present day trends in communication”, in the PG Department of Physics function held on 13th March 2010 at Government Arts College, Villupuram.
99. **TPSC Convener and Invited speaker** in the TPSC national level seminar on” Nonlinear Physics: Theory, Applications and Experiments” held at the Department of Physics, Nehru Memorial College, Puthanampatti, Tiruchirapalli during 29-31, March 2010

100. **Invited speaker** in the One Day seminar on “ Nonlinear Dynamics” held at the Department of Physics, Bharathidasan University, Tiruchirapalli on 2 April 2010
101. **Invited speaker** in the One Day Seminar on “ Recent Trends in Optical Communications held at Shri Andal Alagar College of Engineering, Mamandur on 17th July 2010.
102. **Invited Speaker** in the International Seminar on “ Perspectives of Nonlinear Dynamics 2010” held at Indian Institute of Science, Bangalore during 26-29, July 2010
103. **Invited speaker** in the International Conference on Recent Frontiers in Applied Spectroscopy held at Department of Physics, Annamalai University during 22-24 September 2010
104. **Resource Person** in the UGC sponsored National Workshop on Research Methods and Techniques for Research Guides held at Academic Staff College, Pondicherry University on 24th September 2010.
105. **Resource Person** in the UGC sponsored National Workshop on Research Methods and Techniques for Research Guides held at Academic Staff College, Pondicherry University on 24th September 2010.
106. **Resource Person** in the UGC sponsored Refresher Course held at Academic Staff College, *Madurai Kamaraj University on 23rd November 2010.*
107. **Resource Person** in the UGC sponsored Refresher Course held at Academic Staff College, *Barathiyar University on 24th November 2010.*
108. **Resource Person** in the DST sponsored INSPIRE programme held at K.S.R. Engineering College, Tiruchengodu *on 24th November 2010.*
109. **Key Note Address**, Science and Humanities, Kingston Engineering College, Katpadi on *25th November 2010.*
110. **Invited Speaker**, Micro Seminar on Nonlinear Dynamics, held at S.N.Bose Institute for Basic Sciences on 3rd January 2011
111. **Invited Speaker**, Saha Institute for Nuclear Physics held at 4th January 2011
112. **Invited Speaker**, International Conference on Contemporary Trends in Optics and Optoelectronics, held at Indian Institute of Space Research and Education, Tiruvanathapuram during 17-19, January 2011.
113. **Resource Person**, DST SERC School on Nonlinear Dynamics held at Department of Physics, Bharathidasan University, Tiruchirapalli during 19-20 January, 2011
114. **Invited Speaker**, Sixth National Conference on Nonlinear Dynamics held at Department of Physics, Bharathidasan University, Tiruchirapalli during 26-30 January, 2011
115. **Invited Speaker**, National Conference on Emerging Trends in Materials Science held at Departments of Physical Science and Electronics & Communication, Muthayammal College of Arts & Science, Rasipuram during 4-5 February, 2011
116. **Mentor**, DST INSPIRE Programme held at K.S.R. Engineering College, Tiruchengodu during 9-10, 16-17, 22 February, 2011
117. **Mentor**, DST SERC School on Guided Wave Optics and Devices held at Central Glass and Ceramic Research Institute Kolkatta on 19 February, 2011

118. **Mentor**, DST INSPIRE Programme held at K.S.R.Engineering College, Tiruchengodu during 16-17, 23-24, 30-31 July, 2011
119. **Key Note address and Invited talk** in the regional seminar on “ Recent Trends in Nonotechnology “ held at Department of Physics, Govt Arts College Tiruvannamalai during 5-6 August 2011
120. **Mentor**, DST INSPIRE Programme held at Vel Tech University on 10th August 2011
121. **Invited Speaker**, Academy Seminar on Applications of Nonlinearity held at Fatima College, Madurai during 25-26 August 2011
122. **Key Note Address** in the Science and Humanities Function, CK College of Engineering & Technology, Cuddalore on 16th September 2011 and special address on Recent Science Trends in Fibre Optics and its Applications.
123. **Invited Speaker** in the National Conference of Recent and Emerging Developments in Physics held at Marudhar Kesari Jain College for Women at Vaniambodi on 23rd September 2011
124. Resource Person, AICTE Workshop on “ **Nanotechnology**” held at Department of Mechanical Engineering, Pondicherry Engineering College, Puducherry on 31st October 2011
125. Invited Speaker in the Science and Humanities Department inauguration function held at Krishnaswamy College of Engineering and Technology, Cuddalore on 10th November 2011
126. **Invited Speaker** in the International Conference on Advanced materials held at PSG College of Technology at Coimbatore during 24-26, December 2011
127. **Invited Speaker** in the National Conference on Advanced Materials & Applications held at Sathyabama University, Chennai during 6-7 January 2012
128. **Mentor**, DST INSPIRE Programme held at at SSN Engineering College at Chennai on 26th January 2012
129. **Invited Speaker** in the International Workshop on Advanced Photonics Materials held at SSN Engineering College at Chennai on 10th February 2012
130. **Key Note speaker and Invited Speaker** in the National Conference of Recent and Emerging Developments in Physics held at Ultra Engineering College for Women at Madurai on 26th February 2012
131. **Mentor**, DST INSPIRE Programme held at K.S.R.Engineering College, Tiruchengodu during 21-22, & 28-29, January 2012 & 4-5 & 11-12, February, 2012
132. **Invited Speaker** in the National Conference on Advanced Materials for Emerging Applications held at Annamalai university, Chidambaram on 1st March 2012