



RUBAN RAJ S

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ACADEMIC VISION

Excellence in Teaching Mathematics; Quest for Knowledge

DATE OF BIRTH : 07.04.1960

DATE OF APPOINTMENT : 09.07.1984

EDUCATION

Ph.D., Mathematics, St Joseph's College, Trichy, 2007
Thesis: *A Study on Fourier and Wavelet Numerical methods for solving nonlinear Schrödinger equations*

PGDCA, Bishop Heber College, Trichy, 1992

M.Phil., Mathematics, St Joseph's College, Trichy, 1988
Dissertation: On Semi-Fredholm and Fredholm operators

B.Ed., Mathematics, Madurai Kamaraj University, 1985

M.Sc., Mathematics, St Joseph's College, Trichy, 1983

TEACHING EXPERIENCE

Associate Professor- Reader- Lecturer (Selection Grade) – Lecturer (Senior Scale)-
Assistant Professor (29 Years :09/07/1984 --- Till date)

RESEARCH SKILLS

Guiding 3 PhD Scholars

Guided 42M.Phil. Scholars

Recognized M.Phil.(1996) and Ph.D. Guide (2011)

PUBLICATION

1. Properties of fuzzy soft set - International Journal for Basic Sciences and Social Sciences **2(1)**, 112-118, 2013.
2. Properties of Soft Intuitionistic Fuzzy Sets - International Journal of Mathematics Trends and Technology **3:6**, 150-156, 2012.
3. Wiener upper and lower sum of P_r^n - tree - International Journal of Computing Algorithm **01 : 02**, 75-78, 2012.
4. Wiener Index of F-Tree and E-Tree - Proceedings of the International Conference in Engineering & Business Management **Vol. I**, 186-188, 2012.
5. Splitstep Fourier method for solving the coupled nonlinear Schrödinger equation - Bulletin of Pure and Applied Sciences **23E** , 41-48, 2004.
6. A damage control system of Tsunami - RETELL**5**, 44-46, 2004.
7. Creation of a daughter wave in the collision of solitons of the perturbed CNLS equations by splitstep Fourier method - Proceedings of UGC sponsored State level Seminar on Mathematical methods in Social Sciences, Jamal Mohamed College, Tiruchirappalli Vol I 30-33, 2004.

Prepared a Text Book "ODE, PDE, Laplace Transforms & Vector Calculus" Allied Maths for BSc Physics, Bharathidasan University, CDE, Trichy.

GRANTS RECEIVED

Minor Research Project -2004-2005 --Rs 35,000-A *Study on the collision dynamics of coupled Solitary Waves*

Presented the DST-FIST proposal at New Delhi and Procured Rs. 17.50 lakh Grant for Mathematics Department, St Joseph's College, Trichy.

ACADEMIC HONOURS

Chairman of Board of Studies in Maths (UG): Bharathidasan University, Tiruchy

Member of Board of Studies in Maths (PG): Bharathidasan University, Tiruchy

Member of Board of Studies: St Joseph's College, Tiruchy

Periyar E V R College, Tiruchy

Holy Cross College, Tiruchy

Nirmala College for Women, Coimbatore

St Joseph's College of Arts & Science, Cuddalore

Member of Academic Council:St Joseph's College, Tiruchy

Member, World Class Curriculum Development Cell: Bharathidasan University, Tiruchy

Examiner, TNPSC, Chennai

Member of Library Committee:St Joseph's College, Tiruchy

LEADERSHIP ACTIVITIES

Head, Dept. of Maths, SJC

Co-ordinator, DST-FIST Programme, Dept. of Maths, SJC

Co-ordinator, Astronomy Club, SJC

Former Co-ordinator, Dept. of Maths-Shift II, SJC

Fine Arts Staff-in-charge for the last 24 years

Former President, Staff Association, SJC, 2005-2007

Former Secretary, Staff Association, SJC, 1990-1991

Former Fine Arts Co-ordinator (1996-1999, 2011-13)

First Additional Chief Superintendent of Examinations, SJC

IN-SERVICETRAINING PROGRAMS

QIP-Short term Training Program on Fourier Transform, Wavelet Transform and Applications, Indian Institute of Technology – Madras, Chennai from 13/12/2004 to 24/12/2004.

Refresher Course in Mathematics, BharathidasanUniversity, Academic Staff College,Trichy from 08/03/2003 to 28/03/2003.

Refresher Course in Mathematics, BharathidasanUniversity, Academic Staff College,Trichy from 02/02/1999 to 01/03/1999.

All India Summer Institutesponsored by UGC on "Functional Analysis and its Applications", St.Joseph's College,Trichy from 08/05/1989 to 04/06/1989.

Orientation Course, BharathidasanUniversity, Academic Staff College, Tiruchirappallifrom 04/04/1989 to 02/05/1989.

COMPUTER SKILLS

Software: MATLAB, SPSS and LaTeX

Languages: C, C++, FORTRAN, Pascal, COBOL & BASIC

EXTENSION & CONSULTANCY

Popular Resource Person in Anna Science Centre- Planetarium, Trichy
-conducted Summer & Winter Science Camps for School Children for last 14 years

Well-known Resource Person for MATLAB Package
-conducted workshops for College Students and Teachers

Well-known Resource Person for LaTeX System
-conducted hands-on training for College Students and Teachers

Science/Mathematics Quiz Master

Regular Speaker in Science Programmes of A.I.R.

Resource Person - Academic

S. No.	Programme	Topic	Place	Level	Date
1	One Day Workshop	LaTeX	Department of Maths, St Joseph's College, Trichy	Regional	13.08.2013
2	Special Lecture	Basic Astronomy	Department of Maths, Holy Cross College, Trichy	Regional	12.07.2013
3	Young Student Scientific Programme	Basic Astronomy	St Xavier's College, Palayamkottai	State Level	22.05.2013
4	Summer Camp	Basic Astronomy	Anna Science Centre- Planetarium, Trichy	Regional	09.05.2013
5	Guest Lecture for M Sc Students	MATLAB	Kongu Arts and Science College, Erode	Regional	01.03.2013

6	Endowment Lecture	Popular Astronomy	AnandaCollege, Devakottai	Regional	27.02.2013
7	Special Lecture	Applications of Differential Equations in Real Life	National College, Trichy	Regional	18.02.2013
8	Radio Talk	Amazing Astronomy	All India Radio, Trichy	Regional	16.02.2013
9	National Seminar MATGLOW - 2K13	Recent Trends in Mathematical Analysis & its applications	Gonzaga College of Arts & Science for Women, Krishnagiri	National	16.02.2013
10	Workshop	MATLAB	Vivekanandha College of Arts and Sciences for Women, Tiruchengode	State Level	23.01.2013
11	Inaugural address, SESHMATH-2013	Fun with Mathematics	The Seshasayee Institute of Technology, Trichy	Regional	12.01.2013
12	Winter Science Camp	Basic Astronomy	Anna Science Centre-Planetarium, Trichy	Regional	29.12.2012
13	Scientific Awareness Campfor School Students	Science - the Fountation for allround development	Anna Science Centre-Planetarium, Trichy	State level	11.12.2012
14	Mathematics Association	Applications of Differential Equations	St Joseph's College, Trichy	Regional	04.10.2012
15	Celebration of National Mathematics Year – 2012	Applications of Differential Equations	S R College, Trichy	Regional	18.07.2012
16	Summer Student Camp	Basic Astronomy	Anna Science Centre-Planetarium, Trichy	Regional	10.05.2012

17	Seminar	Applications of Transforms in Signal Processing	Dept of Electronics & Communications Engineering, Oxford Engineering College, Trichy	Regional	04.05.2012
18	Mathematics Association	Astronomy	Thanthai Hans Roever College, Perambalur	Regional	28.02.2012
19	Training Programme for School Teachers	Math Puzzles	RastriyaMadhyamikShikshaAbhiyan, Trichy	Regional	22.02.2012
20	Workshop	Hands on Training in LaTeX	Nirmala College for Women, Coimbatore	Regional	10.02.2012
21	Research Day	Thesis Writing using LaTeX	St Joseph's College, Tiruchirappalli	Regional	28.01.2012
22	Workshop	Hands on Training in LATEX	ShriSakthikailassh Women's College, Salem	Regional	25.01.2012
23	One Day Seminar	Technical Writing Using LaTeX	Bannari Amman Institute of Technology, Sathyamangalam	Regional	07.01.2012
24	Winter Student Camp-2011	Basic Astronomy	Anna Science Centre – Planetarium, Tiruchirappalli	Regional	28.12.2011
25	Com Fest 2011	Use of Computers	Department of Computer Science, Holy Cross College, Trichy	Regional	06.09.2011
26	Seminar	Mathematical Type-set with LaTeX	AVVM Sri Pushpam College, Poondi	Regional	13.08.2011
27	One Day Seminar on selected topics in Language and Science	Introduction to MATLAB in Engineering	Oxford Engineering College, Trichy	State level	12.08.2011
28	Summer Student Camp-2011	Basic Astronomy	Anna Science Centre – Planetarium, Tiruchirappalli	Regional	08.05.2011

29	Workshop on 'Art of Scientific Article Writing'	Scientific Article Writing Packages – LaTeX	Periyar E.V.R. College, Trichy	State level	12.03.2011
30	Workshop	Art of Scientific Article Writing - LATEX	Periyar EVR College, Trichy	Regional	12.03.2011
31	Workshop	MATLAB	Vivekanandha College of Arts and Sciences for Women, Elayampalayam	State level	27.01.2011
32	Science Mela	Basic Astronomy	Ananda College, Devakottai	State level	08.01.2011
33	Winter Student Camp	Basic Astronomy	Anna Science Centre Planetarium, Trichy	Regional	29.12.2010
34	Two Days Science Seminar for School Teachers	Teaching Mathematics	Extension Dept. - SHEPHERD, St Joseph's College, Tiruchirappalli	Regional	07.12.2010
35.	UGC sponsored One Day Seminar	Astronomy	Periyar EVR College, Trichy	Regional	23.09.2010
36.	Workshop	Technical Computing in MATLAB	ShriSakthikailassh Women's College, Salem	State level	28.08.2010
37.	Workshop	MATLAB	DhanalakshmiSrinivasan College of Arts & Science for Women, Perambalur	State level	26.08.2010
38.	Summer Student Camp	Basic Astronomy	Anna Science Centre Planetarium, Trichy	Regional	12.05.2010

39.	Workshop	An Introduction to LATEX	Kongu Engineering College, Erode	Regional	21.01.2010
40.	Winter Students Camp	Basic Astronomy	Anna Science Centre, Planetarium, Trichy	Regional	30.12.2009
41.	Workshop for School Teachers	Sky & Seasons,	Anna Science Centre, Planetarium, Trichy	State level	11.12.2009
42.	Workshop	LaTeX	DhanalakshmiSrinivasan College of Arts & Science for Women, Perambalur	State level	12.08.2009
43.	Guest Lecture for MCA students	MATLAB	Erode Arts College, Erode	Regional	09.07.2009
44.	Summer Students Camp	Basic Astronomy and Calendar	Anna Science Centre, Planetarium, Trichy	Regional	06.05.2009
45	Two-Day Workshop	MATLAB	St Joseph's College, Trichy	Regional	13.03.2009
46	One Day Seminar	MATLAB	Kongu Arts and Science College, Erode	Regional	21.02.2009
47	One Day Seminar	MATLAB	PKR Arts College for Women, Gobichettipalayam	Regional	20.02.2009
48	One Day Seminar	MATLAB	TiruppurKumaran College for Women, Tiruppur.	Regional	15.02.2009
49	Winter Student Camp	Basic Astronomy	Anna Science Centre, Planetarium, Trichy	Regional	29.12.2008

50	One Day Seminar	Mathematical Computations with MATLAB	Nehru Memorial College, Puthanampatti.	State level	19.09.2008
51	Summer Astronomy Camp	Seasons & Practical Astronomy	Anna Science Centre, Planetarium, Trichy	Regional	07, 08-05-2008
52	Two Day Seminar	Training on MATLAB	Kongu Arts and Science College, Erode	Regional	14-02-2008 15-02-2008
53	One Day Seminar	Romancing the Astronomy	Holy Cross College, Trichy	Regional	13.02.2008
54	Winter Science Camp	Basic Astronomy,	Anna Science Centre, Planetarium, Trichy	Regional	30.12.2007
55	Faculty Development Programme (UGC)	MATLAB Training	Bishop Heber College, Trichy	State level	25, 26-10-2007
56	Summer Science Camp	Basic Astronomy	Anna Science Centre - Planetarium, Trichy	Regional	05.05.2007
57	Workshop	Venus Transit	Anna Science Centre - Planetarium, Trichy	Regional	21.05.2004
58	Summer Science Camp	Basic Astronomy	Anna Science Centre - Planetarium, Trichy	Regional	18.05.2004
59	Special Lecture	Fuzzy Theory	Jamal Mohammed College, Trichy	Regional	04.08.2003
60	Summer Science Camp	Basic Astronomy	Anna Science Centre - Planetarium, Trichy	Regional	16, 17.05.2003
61	Winter	Astronomy	Anna Science Centre -	Regional	30.12.2002

	Science Camp		Planetarium, Trichy		
62	Basic Astronomy Course	Planetary Science and Stellar Universe	Anna Science Centre - Planetarium, Trichy	Regional	20.05.2002
63	Workshop on Effective Teaching in Mathematics	Recreation in Mathematics	St Joseph's College Trichy	National	23.02.2002
64	Basic Astronomy Course	Astronomy	Anna Science Centre - Planetarium, Trichy	Regional	29.05.2001
65	Young Student Scientific Programme	Math made simple	Shepherd Extension Dept., St Joseph's College Trichy	Regional	13.05.2001
66	Special Lecture	Lunar Eclipse	Anna Science Centre - Planetarium, Trichy	Regional	13.07.2000
67	Special Lecture	Wonders in the sky	Anna Science Centre - Planetarium, Trichy	Regional	10.12.1999

SEMINARS, CONFERENCES, WORKSHOPS, ETC. ATTENDED

S. No.	Name of the Programme	Place	Duration of Programme	
			From	To
1	State level Seminar on Mathematical Modelling	St. Joseph's College, Tiruchirappalli	30-01-1997	31-01-1997
2	State level Seminar on Graph Theory	St. Joseph's College, Tiruchirappalli	16-02-1998	-

3	National Seminar on Applications of Mathematics	St. Joseph's College, Tiruchirappalli	17-02-2000	19-02-2000
4	National Seminar on Chaos and Fractals : Applications	Rajagiri School of Engineering and Techn Kochi	18-01-2002	19-01-2002
5	UNESCO Sponsored National Workshop on Effective Teaching of Mathematics	St. Joseph's College, Tiruchirappalli	20-02-2002	23-02-2002
6	National Workshop on Recent Advances in Mathematics	Cochin University of Science and Technology, Cochin	22-01-2004	25-01-2004
7	National seminar on Mathematical Modelling	PSGR Krishnammal College for women, Coimbatore	06-08-2004	-
8	UGC Sponsored State level Seminar on Mathematical Methods in Social Sciences	Jamal Mohamed College, Tiruchirappalli	08-09-2004	09-09-2004
9	National Seminar on Recent Developments in Applied Mathematics	St. Joseph's College, Tiruchirappalli	02-12-2004	03-12-2004
10	National Seminar on Digitalized Information Exchange for Quality Sustena and Enhancement among Accredited Institutions	St. Joseph's College, Tiruchirappalli	03-03-2005	04-03-2005
11	UGC Sponsored Training Programme on MATLAB	Bishop Heber College, Tiruchirappalli	22-02-2008	
12	Reform of Undergraduate and Postgraduate Curriculum for Chairperson of Board of Studies	Council for College and Curriculum Development, Bharathidasan University, Tiruchy	22.11.2012	-

Details of M.Phil. Scholars guided

<i>Year</i>	<i>D. No.</i>	<i>Scholar</i>	<i>Title of the Thesis</i>
2013	12MMA108 Joel Suresh A		Fractional Differential Equations
2013	12MMA111 Rajalakshmi		A Study on Duffing Equations

2013	12MMA113 FrancinaNishandhi		Delay Differential Equations
2013	12MMA115 SahayaJernith		Numerical Methods for solving Des with MATLAB
2013	12MMA127 Mahalakshmi		Lie Symmetries of KdV Equation
2012	11MMA103 M Devanathan		A Study on Lie point Symmetry of PDEs
2012	11MMA104 G Arul Joseph		A Study on Lie point Symmetry of an ODE
2012	11MMA120 R Siluvaidasan		Numerical Methods in PDEs
2012	11MMA122 Maria meruna		A Study on Hirota Method for PDEs
2012	11MMA129 N Shyamala		A Study on Hirota's Method for solving nonlinear DE
2011	10PMA119		A study of painleve analysis
2011	10PMA121		Integrability
2011	10PMA143		A study on bifarcations
2011	10PMA148		A study of fractral geometry
2011	10PMA151		Soliton solution of KdV equation by Hirota's method
2010	09MMA105 R Soundharya		Fundamental properties of Sumudu transform
2010	09MMA107 N Saranya		Laplace decomposition method
2010	09MMA120 S Manjula		Lienard equation and its applications

2009	08MMA117 N Deepalakshmi		Applications of some wavelets
2009	08MMA123		Solution of certain first order ordinary differential equations using Lie symmetries
2009	08MMA126		A study on KdV equations
2008	07MMA102 A Vinothini		Lie point symmetries of Kepler-Ermakov systems
2008	07MMA118 K Maheswari		Lie symmetry reduction of Lane-Emden equation
2006	06MMA109 Alex SagayaLepriye		Perturbation theory of certain nonlinear DEs
2007	06MMA123 M John Paul		A study on fuzzy games
2007	A Subha		Constructing Fuzzy Sets
2007	K Nalini		Fuzzy Ideals and Subrings
2006	A GowriShankari		Adomian Decomposition method for solving kdv equation
2006	05MMA106 K Anitha		Integrability of Emden-Flower equation using Lie point symmetry method
2006	05MMA116 AshaBoseley		Boundary value problems for the heat equation
2006	J Sangeetha		Hirota method for solving Sawada Kotera equations
2005	N Rajathi		Integrability of certain nonlinear differential equations using the Jacobian elliptic functions
2005	D Punitha		Painleve analysis for certain PDEs
2004	J Christy Kingston		Dynamics of Duffing Vander Pol equation

2004	J Indumathi		Fuzzy Dynamical system
2003	J Jayaraj		A study on chaotic behaviour in Logistic maps
2003	G Karuppaiah		A study on integrability of certain Duffing equations through perturbation method
2001	A ThilagaMalathi		Some integral inequalities of Gruss type
1999	A Neil Armstrong		On absolute Norlundsummability factor of Legendre series
1998	S Selvarani		Introduction to Lie's fundamental problem
1997	Arockia Arul Rani		The invariance and integrability properties of some dissipative nonlinear systems

PAPERS PRESENTED:

S.No	Title of the Paper	Name of the conference	Level	Date	Place
1.	A study of perturbations on the collision of solitons in the coupled nonlinear <i>Schrödinger equations</i>	Mathematical Modelling	National	06.08.2004	PSGR Krishnammal College for Women, Coimbatore.
2.	Creation of a daughter wave in the collision of solitons of the perturbed CNLS equations by split-step Fourier method	Mathematical methods in Social Sciences	National	8, 9.09.2004	Jamal Mohammed College, Trichy