

## BIO-DATA OF Dr. R. RAVICHANDRAN

NAME	Dr. R. RAVICHANDRAN	
QUALIFICATION	M.Sc., Ph. D., in Physics	
CURRENT POSITION	<b>ASSISTANT PROFESSOR</b> Dept of Physics Erode Sengunthar Engineering College (Autonomous) Perundurai, Erode-638057, Tamil Nadu, India.	
PERMANENT ADDRESS	S/O Mr. M. Rajendran Sikkanampatty-Post Omalur-Tk Salem- 636 309, Tamilnadu, India	
FATHER NAME	Mr. M. Rajendran	
NATIONALITY	Indian	
MARITAL STATUS	Married	
LANGUAGES KNOWN	English & Tamil	
DATE OF BIRTH	13 July 1988	
CONTACT NO	+91-9629811059	
E-mail	<a href="mailto:physicsravinld@gmail.com">physicsravinld@gmail.com</a>	
RESEARCH EXPERIENCE	8 Years, (2012-2020)	

## Academic Qualifications

Examination passed and Year of passing	School/College / University	Subjects offered	Division	Percentage of marks
S.S.L.C (2003)	V.c.hr.School. Omalur.–636455 Tamilnadu, India.	Tamil, English, Maths, Science and Social Science	First Class	62.80 %
H. S. C (2005)	V.c.hr.School. Omalur.–636455 Tamilnadu, India.	Tamil, English, Maths, Physics, Chemistry and Biology	Second Class	51.93 %
B.Sc., (2008)	Salem Sowdeshwari College Salem – 636 010 Tamilnadu, India	Physics, Maths, Chemistry,Tamil and English	Second Class	58.83 %
M.Sc., (2011)	Nehru memorial college. Puthanapatty. Thiruchirapalli– 621 007 , Tamilnadu, India	Physics	First Class	69.89 %
Ph. D (2013-2017)	Department of Physics Periyar University Salem-11, Tamilnadu, India.	Nonlinear modeling of pulse solitary wave propagation in cardiovascular systems		
2018-2019	Dept. of Physics School of Basic and Applied Sciences, Central University of Tamil Nadu, Thiruvavarur 610 007	CSIR- Post Doctoral Research Associate		

## Academic Distinctions

- ♦ Awarded “Excellent paper award” for the paper presented at National conference on current trends in soft matter (NCCTSM-2015), Department of Physics, School of Basic and Applied Sciences, Central University of Tamil Nadu, Thiruvarur, during 19-20th March 2015.
- ♦ **Field of specialization:**
  - ✓ Computational Physics
  - ✓ Pressure wave instability in fluid filled elastic tubes of arteries
  - ✓ Development and Nonlinear modeling of soliton collision dynamics with blood flow patterns in a stenotic artery

## Area of Interest

- ✓ Classical Mechanics
- ✓ Quantum Mechanics
- ✓ Electromagnetic Theory
- ✓ Condensed Matter Physics
- ✓ Nonlinear Dynamics

## Computer Proficiency

Linux, FORTRAN, Latex, Windows, Mathematica, Maple, Matlab, MS-Office.

## List of Publication and Communicated papers

S. No.	Author(s)	Title of the Article	Name of the Journal	Volume, Issue & Page No.	Year of publication
1.	R. Ravichandran, et al.,	Electromagnetic lump soliton solution of $(2 + 1)$ dimensional ferromagnetic nanowire with Dzyaloshinskii-Moriya interaction	Materials Today: Proceedings	2214-7853	2020
2.	R. Ravichandran, et al.,	Propagation and collisional dynamics of electromagnetic soliton in an	International journal of Advances in Science, Engineering	3 (4) Publisher : IRA.J	2015

		anisotropic ferromagnetic nanowire	and Technology (IJASEAT) (Impact factor: 1.016)		
3..	R. Ravichandran, et al.,	Oscillating multidromion excitations in higher dimensional nonlinear lattice with intersite and external on-site potentials using symbolic computation	Chinese Physics B (Impact factor: 1.603)	23, 010307 Publisher : IOP	2014
4.	R. Ravichandran, et al.,	Collision of electromagnetic solitons in a weak ferromagnetic medium	Journal of magnetism and magnetic materials (Impact factor: 1.970)	355, 37–50 Publisher : Elsevier	2014
5.	R. Ravichandran, et al.,	Collision of blood pressure pulse solitary waves in thin elastic tube of large arteries,	communicated to Theoretical and Mathematical Physics Impact factor: 0.600	Publisher: Russian Academy of Sciences	2020
6.	R. Ravichandran, et al.,	Soliton dynamics of blood flow in arteries with effect of shear stress in large vessels	(Under Revision) Chinese Physics B, Impact factor: 1.603	Publisher : IOP	2020
7.	R. Ravichandran, et al.,	Pressure wave instability in fluid filled elastic tubes of large arteries	(Under Revision) Physics of Fluids (2018), Impact factor: 1.942;	Publisher: American Institute of Physics.	2020

8.	R. Ravichandran, et al.,	Solitary evolution of blood pressure waves in arteries	(Under Revision) Journal of Mathematical Physics (2018), <b>Impact factor:</b> 1.296;	<b>Publisher:</b> American Institute of Physics.	2020
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### List of Papers presented in the National/International Conferences

S. NO	AUTHOR'S NAME	PAPER TITLE, CONFERENCE/WORKSHOP TITLE, PLACE & YEAR	INTERNATIONAL/NATIONAL
1	R. Ravichandran, et al.,	Exact solitary solutions of integrable (2+1) dimensional generalized Sasa-Satsuma equation, <i>Second National conference on Advances in Differential Equations and Applications (NCADEA -2012)</i> , Periyar University, Salem, March 29-30 (2012).	National
2	R. Ravichandran, et al.,	Propagation and collisional dynamics of electromagnetic soliton in an anisotropic ferromagnetic nanowire, <i>International Journal of Advances in Science Engineering and Technology</i> , 28 <sup>th</sup> The IIER International Conference, Paris, France, 21 <sup>st</sup> June 2015	International
3	R. Ravichandran, et al.,	Solitary evolution of blood pressure waves in Arteries, 28 <sup>th</sup> The IIER International Conference, Paris, France, 21 <sup>st</sup> June 2015	International
4	R. Ravichandran, et al.,	Nonlinear dynamics of blood pressure waves in large elastic tubes, <i>International seminar on current trends in Quantum Gases, BEC and solitons</i> , Panjab University, Chandigarh, March 3-6, 2014	International
5	R. Ravichandran, et al.,	Modulation of solitary wave collision in a fluid filled with arterial thick elastic tube, <i>8th International conference on nonlinear science, Dynamics Days Asia pacific</i> , IIT and IMSc, Chennai, India July	International

		<b>21-24,2014</b>	
6	R. Ravichandran, et al.,	Collision of blood pressure pulse solitary waves in thin elastic tube of large arteries, <i>International conference on Physiology and Medicine, Periyar University during 15th-17th October, 2014.</i>	International
7	R. Ravichandran, et al.,	Modified extended tanh-function method and nonlinear dynamics of arterial deformation in blood flow, <i>Perspectives in Nonlinear Dynamics (PNLD), University of Hyderabad, July 15-18, 2013.</i>	International
8	R. Ravichandran, et al.,	Perturbed soliton excitations and soliton collisions in a DNA molecule, <i>8th conference on Nonlinear Systems and Dynamics (CNSD), IIT, Indore, 11-14 December 2013.</i>	National
9	R. Ravichandran, et al.,	Collision of blood pressure pulse solitary waves in elastic tube of arteries, <i>National seminar on emerging trends in theoretical and experimental physics (ETTEP-2015), Sree Ayyappa College for Women, 8&amp;9 January 2015</i>	National
10	R. Ravichandran, et al.,	Perturbed soliton excitations in blood flow of large vessels with effect of nonlinear stress-strain condition, <i>National symposium on X-Ray diffraction and recent advances in crystallography, Department of Physics, School of Sciences, Periyar University, 27-28th February, 2015.</i>	National

11	R. Ravichandran, et al.,	Pressure wave instability in fluid filled elastic tubes of large arteries, <i>National conference on current trends in soft matter(NCCTSM-2015)</i> , <b>Department of Physics, School of Basic and Applied Sciences, Central University of Tamil Nadu, Thiruvavur, during 19-20th March 2015.</b>	National
12	R. Ravichandran, et al.,	Soliton dynamics of blood flow in arteries under the influence of shear stress in large vessels, <i>International conference of Recent Advances in Applied Sciences, Science &amp; humanities, St. Peters University Indian spectrophysics association, during 11- 13 February 2016</i>	International

### **Conference/ Seminar/ Workshops participated**

<b>S. NO.</b>	<b>CONFERENCE/ SEMINAR/ WORKSHOPS OF TITLE</b>	<b>INSITITUD PLACE &amp; YEAR</b>	<b>ORGANISER NAME</b>	<b>NO. OF DAYS</b>
1	DST-SERC School on Nonlinear Dynamics	Department of Physics Central University of Rajasthan, Ajmer, Rajasthan and December,1-20,2014	Dr. Manish Dev Shrimali Director, DST SERC School, Central University of Rajasthan, Ajmer, Rajasthan	20
2	National Conference on Advanced nanomaterials	Periyar University, Salem, Tamil Nadu, India, during 06-07 Feb 2012.	Dr. D. Gopi Professor of Chemistry, Periyar University, Salem	02
3	Workshop on Functional Materials	Periyar University, Salem, Tamil Nadu and 12th March 2012	Dr. E.K. Girija Assistant Professor of Physics, Periyar University, Salem	01
4	One day Seminar on Recent Trends in Superconductivity	Periyar University, Salem, Tamil Nadu on 22th march 2012	Associate Professor of Physics School of Basic and Applied Sciences Central University of Tamil Nadu, Thiruvavur Tamilnadu, India	01
5	National Conference on Nonlinear System and Dynamics	IISER, Pune, Maharashtra, India, during 12-15 July 2012.	Pro. G. Ambika Professor, Physics IISER, Pune	04

6	Workshop on Modern trends in Chemistry	Periyar University, Salem-11, Tamil Nadu and August 13-14 2012	Prof. Dr. D. Gopi Professor of Chemistry, Periyar University, Salem	02
7	Second national conference on advances in differential equations and applications	Periyar University, Salem-11, Tamil Nadu and March 29-30 2012	Dr. P. Prakash Assistant Professor of Mathematics, Periyar University, Salem	02
8	National Workshop on Mathematical Analysis and its Applications	Periyar University, Salem-11, Tamil Nadu and May 07-12 2012	Dr. S. Karthikeyan Assistant Professor of Mathematics, Periyar University, Salem	06
9	National Level TPSC Workshop on Nonlinear Physics: Theory, Experiments and Applications	Post Graduate and Research Department of Physics, Nehru Memorial College, Puthanampatti, Trichy and March 29-31, 2010	Dr. A. Venkatesan Department of Physics, Nehru Memorial College, Puthanampatti, Tiruchirappalli,	03
10	One day Seminar on National Science day celebration (NSDC)	Periyar University, Salem-11, Tamil Nadu and Feb 26, 2016	Dr. A. Thirunavukkarsu Assistant Professor of Mathematics, Periyar University, Salem	01
11	Workshop on Research Fellowships and Post Doc Position	School of Sciences, Periyar University, Salem-11, Tamil Nadu and Feb 12, 2015	Prof. V. Krishnakumar Dean, School of Sciences, Periyar University, Salem	01

**Extracurricular activities:**

1. Ten days NSS Special camping Program on the theme *Healthy youth for Healthy India* organized at Chettichavadi during UG Graduate degree level.



## **REFERENCES:**

### **Prof.Dr. P.M. Anbarasan**

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### **Dr. J. Kalyana Sundar**

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## **Declaration**

I here declare that the above mentioned particulars are true to the best of my knowledge and belief.

Place: Salem

Yours truly,

Date:

**(Dr. R. Ravichandran)**