# Dr.GEETHA N

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# Qualification

Degree	Branch	Institution / University	Year of Passing
Ph. D.	Mathematics	Bharathidasan University	2017
M. Phil.	Mathematics	Madurai Kamaraj University	2008
M. Sc.	Mathematics	Madurai Kamaraj University	2007
B. Sc.	Mathematics	N. M. S. S. V. N College, Nagamalai, Madurai - 625019	2005

### Ph.D. Details

**Title of Thesis** 

Numerical methods for singularly perturbed differential

equations with turning points

**Research Supervisor** Dr. A. Tamilselvan

**Research Centre** 

Bharathidasan University

**Area of Specialization** 

Differential Equations, Singular Perturbation Problems

Year of Award April 2017

Work Experience WISI DOMINUS FRUSTRA							
Name of Institution	Address of Institution	Designation	From	То			
Bharathidasan University	Department of Mathematics, Bharathidasan University, Tiruchirappalli - 620024	Guest Lecturer	01-07-2016	30-04-2017			
Dept. of Mathematics, Bharathidasan University	Department of Mathematics, Bharathidasan University, Tiruchirappalli - 620024	Guest Lecturer	16-07-2018	30-04-2019			
Dept. of Mathematics Bharathidasan University	Bharathidasan University, Tiruchirappalli - 620024	Guest Lecturer	03-08-2009	30-04-2011			
Bishop Heber College	Department of Mathematics, Bishop Heber College, Tiruchirappalli - 620017	Assitant Professor	26-06-2019	till date			

U.G.: 6 P.G.: 6 M.Phil. Ph.D.

Research Guidance

U.G.: 4 P.G.: 10 M.Phil.: Ph.D.:

# **Table of Contents**

1.	Conferences / workshops / Seminars Attended	24
2.	Research Papers Presented	5
3.	Publication in Journals	7
4.	Publication in Books	0
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6.	Conferences / Worksho <mark>ps / Seminars Organised</mark>	0
7.	Research Projects	0
8.	Resource Person	0
9.	Consultancy	0
10.	Awards Recieved  Awards Recieved	0
11.	Patent	0
12.	Extension Activities Undertaken	0
13.	Professional Membership	0
14.	M.Phil. / Ph.D. Produced	0 / 0

- 24
- International level Conference on "Heber International conference on Applied Mathematics" sponsored by Bishop Heber college, Tiruchirappalli organized by Bishop Heber college, Tiruchirappalli at Tiruchirappalli during 28/04/2021 to 28/04/2021.
- National level Refresher on "FDP in Mathematics on Machine Learning" sponsored by Bishop Heber college, Tiruchirappalli organized by Bishop Heber college, Tiruchirappalli at Tiruchirappalli during 19/03/2021 to 20/03/2021.
- International level Conference on "Heber International Conference on Applied Actuarial Science" sponsored by Department of Actuarial Science, Bishop Heber college, Tiruchirappalli organized by Department of Actuarial Science, Bishop Heber college, Tiruchirappalli at Tiruchirappalli during 09/01/2020 to 10/01/2020.
- International level Conference on "International Conference on Applications of Basic Sciences" sponsored by Department of Mathematics, Bishop Heber college, Tiruchirappalli organized by Department of Mathematics, Bishop Heber college, Tiruchirappalli at Tiruchirappalli during 19/11/2019 to 21/11/2019.
- 5. National level Workshop on "Functional Analysis and applications" sponsored by Department of Mathematics, Bharathidasan University, Tiruchirappalli organized by Department of Mathematics, Bharathidasan University, Tiruchirappalli at Tiruchirappalli during 09/03/2017 to 10/03/2017.
- 6. International level Conference on "31st Annual Conference of the Ramanijan Mathematical Society" sponsored by Department of Mathematics, National College, Tiruchirappalli organized by Department of Mathematics, National College, Tiruchirappalli at Tiruchirappalli during 18/06/2016 to 21/06/2016.
- 7. International level Workshop on "Algebraic and Applied Combinatorics" sponsored by Department of Mathematics, National College Tiruchirappalli organized by Department of Mathematics, National College Tiruchirappalli at Tiruchirappalli during 15/06/2016 to 17/06/2016.
- 8. International level Conference on "Computational Heat and Mass Transfer" sponsored by Department of Mathematics, National institute of technology, Warangal organized by Department of Mathematics, National institute of technology, Warangal at NIT Warangal, Telangana State India during 30/11/2015 to 02/12/2015.
- 9. National level Conference on "Advances in mathematics and its applications to science and engineering" sponsored by Department of Mathematics, University College of Engineering, Pattukkottai, Tanjavur organized by Department of Mathematics, University College of Engineering, Pattukkottai, Tanjavur at Tanjavur during 22/01/2015 to 22/01/2015.
- International level Workshop on "Differential Equations and Numerical Analysis Mathematical Methods and Applications" sponsored by Department of Mathematics Bishop Heber college Tiruchirappalli organized by Department of Mathematics Bishop Heber college Tiruchirappalli at Tiruchirappalli during 05/01/2015 to 01/01/1900.
- International level Conference on "Mathematics and its Applications" sponsored by Anna university, University college of engineering, Villupuram organized by Anna university, University college of engineering, Villupuram at Villupuram during 15/12/2014 to 17/12/2015.
- 12. International level Conference on "Mathematical Modeling and Computer Simulation" sponsored by Department of Mathematics, Indian Institute Technology, Madras organized by Department of Mathematics, Indian Institute Technology, Madras at Chennai during 08/12/2014 to 10/12/2014.
- 13. National level Conference on "Analysis and Applied Mathematics" sponsored by Department of Mathematics, NIT organized by Department of Mathematics, NIT at Tiruchirappalli during 27/11/2014 to 28/11/2014.
- National level Conference on "Finite element methods for Navier-stokes equations" sponsored by SERC, Indian Institute of Science, Bangalore organized by SERC, Indian Institute of Science, Bangalore at Bangalore during 08/09/2014 to 12/09/2014.
- 15. National level Conference on "Mathematical Methods and Applications" sponsored by Department of Mathematics, IIT Madras organized by Department of Mathematics, IIT Madras at Chennai during 22/12/2013 to 22/12/2013.

- 16. National level Workshop on "Differential Equations and its Applications" sponsored by Indian Institute of Space Science and Technology(IIST), Thiruvanathapuram organized by Indian Institute of Space Science and Technology(IIST), Thiruvanathapuram at Thiruvanathapuram during 18/12/2013 to 21/12/2013.
- National level Conference on "Advances in Partial Differential Equations" sponsored by Srinivasa Ramanujan Centre, SASTRA University, Kumbakonam organized by Srinivasa Ramanujan Centre, SASTRA University, Kumbakonam at Kumbakonam during 13/12/2013 to 14/12/2013.
- <sup>18.</sup> State level Workshop on "*Differential Equations and Applications*" sponsored by Anna University, Tiruchirappalli organized by Anna University, Tiruchirappalli at Tiruchirappalli during 05/12/2013 to 06/12/2013.
- 19. National level Conference on "Recent trends in Analysis and Applied Mathematics" sponsored by Department of Mathematics, NIT organized by Department of Mathematics, NIT at Tiruchirappalli during 09/05/2013 to 10/05/2013.
- 20. National level Conference on "Frontiers in Analysis and Differential Equations" sponsored by Department of Mathematics, Bharathidasan University, Tiruchirappalli organized by Department of Mathematics, Bharathidasan University, Tiruchirappalli at Tiruchirappalli during 19/12/2012 to 20/12/2012.
- 21. National level Workshop on "Scholarly Information Access" sponsored by Bharathidasan University, Tiruchirappalli organized by Bharathidasan University, Tiruchirappalli at Tiruchirappalli during 23/10/2009 to 24/10/2009.
- 22. National level Conference on "Curriculum Development at P.G Level in Mathematics" sponsored by Department of Mathematics, Madurai Kamaraj University organized by Department of Mathematics, Madurai Kamaraj University at Madurai Kamaraj University, Madurai during 01/03/2007 to 02/03/2007.
- National level Conference on "Geometry and its Applications" sponsored by Department of Mathematics, Madurai Kamaraj University organized by Department of Mathematics, Madurai Kamaraj University, Madurai during 08/09/2006 to 08/09/2006.
- National level Workshop on "The use of e-journals in Mathematical Sciences" sponsored by Dr.T.P.M Library, Madurai Kamaraj University organized by Dr.T.P.M Library, Madurai Kamaraj University during 28/11/2005 to 01/01/1900.

NISI DOMINUS FRUSTRA

- 1. "A Higher Order Finite Difference Scheme for a Singularly Perturbed Second Order Differential equations with turning points" in the International conference on Heber International conference on Applied Mathematics sponsored by , organized by Bishop Heber college, Tiruchirappalli at Tiruchirappalli during 28/04/2021 to 01/01/1900.
- 2. "Fourth order backward difference formula for a first order stiff system in piecewise uniform mesh" in the National conference on Fourth order backward difference formula for a first order stiff system in piecewise uniform mesh sponsored by , organized by Department of Mathematics, University college of engineering, Pattukkottai, Tanjavur at Tanjavur during 22/12/2016 to 01/01/1900.
- 3. "Parameter uniform numerical method for a weakly coupled system of second order singularly perturbed turning point problem with Robin boundary conditions" in the National conference on Computational Heat and Mass Transfer sponsored by , organized by Department of Mathematics, National Institute of Technology at Warangal, Telangana State, India during 30/11/2015 to 02/12/2015.
- 4. "Parameter uniform numerical method second order singularly perturbed turning point problem with Robin boundary conditions" in the International conference on *International* workshop on "Differential Equations and Numerical Analysis Mathematical Methods and Applications sponsored by , organized by Department of Mathematics, Bishop Heber college at Tiruchirappalli during 05/01/2015 to 07/01/2015.
- 5. "Parameter uniform numerical method for third order singularly perturbed turning point problems exhibiting boundary layers" in the National conference on *National symposium on "Mathematical Methods and Applications* sponsored by , organized by Department of Mathematics, IIT Madras, Chennai at Chennai during 22/12/2013 to 01/01/1900.

NISI DOMINUS FRUSTRA

#### Publication in Journals -

- 1. "An analysis of overlapping Schwarz method for a weakly coupled system of singularly perturbed convection-diffusion equations" published in Int J Numer Meth Fluids. (PEER REVIEW) Vol. 92, Issue No. 6, November 2019 ISSN: 1097-0363.
- 2. "Robust numerical method for singularly perturbed turning point problems with Robin type boundary conditions" published in J. Appl. Math. & Informatics (PEER REVIEW) Vol. 37, Issue No. 3, June 2019 ISSN: ---.
- 3. "Parameter uniform numerical method for fourth order singularly perturbed turning point problems exhibiting boundary layers" published in Ain Shams Engineering journal (SELECT) Vol. 9, Issue No. 4, December 2018 ISSN: ---.
- 4. "Variable mesh spline approximation method for solving second order singularly perturbed turning point problems with Robin boundary conditions" published in nternational Journal of Applied and Computational Mathematics (PEER REVIEW) Vol. 3, Issue No. 2, January 2017 ISSN:
- 5. "Parameter uniform numerical method for third order singularly perturbed turning point problems exhibiting boundary layers" published in International Journal of Applied and Computational Mathematics (SELECT) Vol. 2, Issue No. 3, January 2017 ISSN: ---.
- 6. "Numerical method for system of second order singularly perturbed turning point problems exhibiting boundary layers" published in Journal of Mathematical Modeling (PEER REVIEW) Vol. 6, Issue No. 2, January 2016 ISSN: ---.
- 7. "Parameter uniform numerical method for a weakly coupled system of second order singularly perturbed turning point problem with Robin boundary conditions" published in Procedia Engineering (PEER REVIEW) Vol. 127, Issue No., January 2015 ISSN: ---

### **Books Published / Edited**

\* P Mariappan . *Vector Calculus and Trigonometry*. Chennai : New Century Book House , September 2020.

### TRAINING PROGRAMME - 1

# COLLEGE level REFRESHER on ""Faculty Recharging Programme" Sponsored by , Organized by IQAC at Bishop Heber College during 12/06/2019 - 13/06/2019.