

# T. Valanarasu

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## Academic Qualifications

- 1998 **M.Sc.**, *Bharathiar University, Coimbatore*
- 2000 **M.Phil.**, *Department of Mathematics, Bharathiar University, Coimbatore*
- 2007 **Ph.D.**, *Department of Mathematics, Bharathidasan University, Tiruchirappalli*

## Teaching Experience: 18 Years

- 2022 onwards **Associate Professor**, *Bharathidasan University, Tiruchirappalli*
- 2020–2022 **Associate Professor & Head**, *Government Arts and Science College (Formerly Bharathidasan University College), Perambalur*
- 2008–2020 **Assistant Professor & Head**, *Government Arts and Science College (Formerly Bharathidasan University College), Perambalur*
- 2007–2008 **Postdoctoral Fellow**, *Bharathidasan University, Tiruchirappalli*
- 2006–2007 **Lecturer**, *VIT University, Vellore*
- 2003–2005 **Guest Lecturer**, *Bharathidasan University, Tiruchirappalli*

## Membership in

### Academic Bodies (such as Board of Studies etc.,)

- Reviewer in some International Journals.
- Member, Academic Council of Government Arts and Science College (Formerly Bharathidasan University College), Perambalur, (2008-2022).
- Member of PG Board of Studies in Mathematics, Bharathidasan University, (2016-2019).
- Member of PG Board of Studies in Mathematics, Bharathidasan University, (2021-2024).

## Research Experience: 22 Years

### Areas of Research

Numerical Analysis of Singularly Perturbed Differential Equations, Delay Differential Equations.

## Research Supervision/Guidance:

Program of Study		Completed	Ongoing
Research	Ph.D	1	0

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/Chapters Monographs/Manuals
15	-	-	-	-

Cumulative Impact Factor (as per JCR)	:9.33
h index	:8
i10 index	:8
Total Citations	:167

## List of Publications

- [1] T. Valanarasu and N. Ramanujam, Asymptotic Initial Value Methods for Two-Parameter Singularly Perturbed Boundary Value Problems for Second Order Ordinary Differential Equations, Applied Mathematics and Computation, 137(2003), 549-570.
- [2] T. Valanarasu and N. Ramanujam, Asymptotic Initial- Value Method for Singularly- Perturbed Boundary -Value Problems for Second - Order Ordinary Differential Equations, Journal of Optimization Theory and Applications, 116(1), (2003), 167 - 182.
- [3] T. Valanarasu and N. Ramanujam, An Asymptotic Initial Value Method for Boundary Value Problems for a System of Singularly Perturbed Second Order Ordinary Differential Equations, Applied Mathematics and Computation, 147, (2004), 227 - 240.
- [4] T. Valanarasu and N. Ramanujam, Asymptotic Initial Value Method for a System of Singularly Perturbed Second Order Ordinary Differential Equations of

Convection Diffusion Type, International Journal of Computer Mathematics, 81(11),(2004), 1381 - 1393.

- [5] T. Valanarasu and N. Ramanujam, An Asymptotic Initial Value Method for Second Order Singular Perturbation Problems of Reaction- Diffusion Type with a Discontinuous Source Term. Journal of Optimization Theory and Applications, 133(3), (2007), 371 - 383.
- [6] T. Valanarasu and N. Ramanujam, An Asymptotic Initial Value Method for Second Order Singular Perturbation Problems of Convection-Diffusion Type with a Discontinuous Source Term. Journal of Applied Mathematics & Computing, 23(1-2), (2007), 141-152.
- [7] T. Valanarasu and N. Ramanujam, An Asymptotic Numerical Method for Singularly Perturbed Third Order Ordinary Differential Equations With Weak Interior Layer, International Journal of Computer Mathematics, 84,(2007), 333-346.
- [8] T. Valanarasu and N. Ramanujam, An Asymptotic Numerical Method for Singularly Perturbed Third Order Ordinary Differential Equations with a Discontinuous Source Term, Novai Sad Journal of Mathematics, 37(2), (2007), 41-57.
- [9] A. Tamilselvan, N. Ramanujam, R. Mythili Priyadharshini and T. Valanarasu, Parameter-Uniform Numerical Method for a System of Coupled Singularly Perturbed Convection-Diffusion Equations with Mixed Type Boundary Conditions. J. appl. Math. & Informatics, 28(1-2), (2010), 109-130.
- [10] R. Mythili Priyadharshini, N. Ramanujam and T. Valanarasu, Hybrid Difference Schemes for Singularly Perturbed Problem of Mixed Type with Discontinuous Source Term. J. appl. Math. & Informatics, 28(5), (2010), 1035-1054.
- [11] T. Valanarasu, R. Mythili Priyadharshini, N. Ramanujam and A. Tamilselvan, Parameter-Uniform Numerical Method for a System of Convection-Diffusion Equations with Discontinuous Convection Coefficients and Source Terms. Applications and Applied Mathematics:An International Journal, 8(1),(2013), 191-213.
- [12] A. Ramesh Babu and T. Valanarasu, A weakly coupled system of singularly perturbed convection-diffusion equations with discontinuous source term, J. appl. Math. & Informatics, 37 (5-6),(2019), 357-382.
- [13] A. Puvaneshwari, A. Ramesh Babu and T. Valanarasu, Cubic Spline Scheme Approximation Method for Singularly Perturbed Periodical Boundary Value Problem, Novi Sad Journal of Mathematics, 50 (1), (2020), 157-172.

- [14] A. Puvaneshwari, T. Valanarasu, and A. Ramesh Babu, A System of Singularly Perturbed Periodic Boundary Value Problem: Hybrid Difference Scheme, International Journal of Applied and Computational Mathematics, 6 (86), 2020, published online May 28, 2020. <https://doi.org/10.1007/s40819-20-00842-1>.
- [15] A. Puvaneshwari and T. Valanarasu, Cubic Spline Approximation Method for Periodic Singular Perturbation Problem, South East Asian Journal of Mathematics and Mathematical Sciences, (2022),65-78.
- [16] A. Puvaneshwari and T. Valanarasu, Spline Approximation Methods for Second Order Singularly Perturbed Convection -Diffusion Equation with Integral Boundary Condition (Communicated).
- [17] A. Puvaneshwari and T. Valanarasu, Spline Collocation Methods for solving Singularly Perturbed Boundary value Problem with Periodic Boundary Condition (Communicated).