

**BIO DATA**

**Name:** Dr. V. Ananthaswamy

**Designation:** Assistant Professor

**Department:** Mathematics

**College:** The Madura College (Autonomous), Madurai, Tamil Nadu, India.

**Mail Id:** [ananthu9777@rediffmail.com](mailto:ananthu9777@rediffmail.com) and [ananthu9777@gmail.com](mailto:ananthu9777@gmail.com)

- 1. Age and Date of Birth:** 36 years, 08.07.1978.
- 2. Qualifications:**  
M.Sc., M. Phil., Ph.D., MRMS.
- 3. Total years of Teaching experiences (As on 31.05.2014) :**  
14 Years  
**Professional colleges:** 7 ½ Years  
**Arts and Science colleges:** 6 ½ Years
- 4. Total years of Research experiences:** 2 years
- 5. Area of specialization :** Mathematical Modeling and Non-linear differential equations .
- 6. No. of M.Phil students under my guidance:** 04.
- 7. Recognized Guide in M.Phil ., and Ph.D.,(Mathematics) at Karpagam University, Coimbatore.**

**8. No. of papers presented in Conferences/Seminars: 06**

**9. No. of conferences/seminars/workshops participated: 17.**

**10.No. of Minor projects sanctioned: 01.**

**Minor project details**

**Project Title** : Mathematical Modeling and Non-linear Reaction-Diffusion Process

**Project No.** : F. MRP- 4122/12 (MRP/UGC-SERO)

**Total cost** : Rs. 60,000

**Duration** : 18 months (01.04.2013 to 30.09.2014).

**Status** : On going.

**Sanctioned Authority:** UGC (India)

**11.Papers published: Total: 18**

Indian Journals: Published: 8 Communicated: 1  
Accepted: 2

International Journals: Published: 10 Communicated: 6  
Accepted: 2

**12.Membership bodies:** Life Member in Ramanujan Mathematical Society (MRMS), Bangalore, India.

**13. Editorial Member/Reviewer/Editorial Board** in the following **International and National Journals**

(i) **Editorial Member in International Journal of Automation and Control Engineering (IJACE)**, Science and Engineering Publishing from 7<sup>th</sup> March 2014 to till date.

(ii) **Editorial Member in Frontiers in Sensors (FS)**, Science and Engineering Publishing from 10<sup>th</sup> March 2014 to till date.

(iii) **Reviewer in Advances in Chemical Sciences**, Science and Engineering Publishing from 19<sup>th</sup> March 2014 to till date.

- (iv) **Editorial Member in International Journal Innovative Research in Science Engineering and Technology (IJIRSET)**, from 28<sup>th</sup> March 2014 to till date.
- (v) **Editorial Member in Canadian Open Mathematics Journal** from 4<sup>th</sup> April 2014 to till date.
- (vi) **Editorial Member in Canadian Open Mathematical Modeling and Applied Computing Journal** from 4<sup>th</sup> April 2014 to till date.
- (vii) **Editorial Member in Canadian Open Advanced Mathematics Journal** from 4<sup>th</sup> April 2014 to till date.
- (viii) **Editorial Member in Canadian Open Mathematics and Physical Science Journal** from 4<sup>th</sup> April 2014 to till date.
- (ix) **Editorial Member in Canadian Open Natural Science Journal** from 4<sup>th</sup> April 2014 to till date.
- (x) **Editorial Member in Canadian Open Applied Chemical Science Journal** from 4<sup>th</sup> April 2014 to till date.
- (xi) **Editorial Member in Canadian Open Applied Engineering Journal** from 4<sup>th</sup> April 2014 to till date.
- (xii) **Editorial Member in Canadian Open Science and Technology Journal** from 5<sup>th</sup> April 2014 to till date.
- (xiii) **Editorial Member in Canadian Open Engineering Technology Journal** from 5<sup>th</sup> April 2014 to till date.
- (xiv) **Editorial Member in Canadian Open Foundation of Mathematics Journal** from 5<sup>th</sup> April 2014 to till date.
- (xv) **Editorial Member in Canadian Open Modern Nonlinear Theory and Application Journal** from 5<sup>th</sup> April 2014 to till date.
- (xvi) **Editorial Member in Canadian Open Mathematical Finance Journal** from 5<sup>th</sup> April 2014 to till date.

- (xvii) **Editorial Member in Canadian Open Statistics and Mathematics Journal** from 5<sup>th</sup> April 2014 to till date.
- (xviii) **Editorial Member in Canadian Open Statistics Journal** from 5<sup>th</sup> April 2014 to till date.
- (xix) **Editorial Member and Reviewer in International Journal of Scientific and Engineering Research (IJSER)** from 16<sup>th</sup> April 2014 to till date.
- (xx) **Board of Editor in Weekly Science International Research Journal** from 17<sup>th</sup> April 2014 to till date.
- (xxi) **Editorial Member/Advisory/Reviewer in International Journal of Mathematical Archive (IJMA)** from 17<sup>th</sup> April 2014 to till date.
- (xxii) **Editorial Member in Indian Stream Research Journal** from 18<sup>th</sup> April 2014 to till date.
- (xxiii) **Advisory Board in Golden Research Thoughts (An International Recognition Multidisciplinary Research Journal)** from 26<sup>th</sup> April 2014 to till date.
- (xxiv) **International Advisory Board in Review of Research (An International online Multidisciplinary Journal)** from 26<sup>th</sup> April 2014 to till date.
- (xxv) **Editorial Member in Indian Journal of Applied Research** from 28<sup>th</sup> April 2014 to till date.
- (xxvi) **Editorial Member in Mathematical Modelling and Applied Computing** from 29<sup>th</sup> April 2014 to till date.
- (xxvii) **Editorial Member in Global Journal of Pure and Applied Mathematics** from 29<sup>th</sup> April 2014 to till date.
- (xxviii) **Reviewer in International Journal of Advances in Applied Sciences** from 17<sup>th</sup> May 2014 to till date.

- (xxix) **Reviewer** in **Global Journal of Science Frontier Research (GJSFR): (F) Mathematics and Decision** from 3<sup>rd</sup> May 2014 to till date.
- (xxx) **Editorial Member** in **International Journal of Mathematical Modeling and Engineering Sciences (IJMRS)** from 20<sup>th</sup> May 2014 to till date.
- (xxxix) **Editorial Member** in **International Society of Applied Sciences (IJAS)** from 20<sup>th</sup> May 2014 to till date.

### List of Publications

1. **V. Ananthaswamy**, L. Rajendran, Approximate analytical solution of non-linear kinetic equation in a porous pellet, **Global Journal of Pure and Applied Mathematics**, Vol. 8(2), 2012, pp.101-111.
2. **V. Ananthaswamy**, L. Rajendran, Analytical solution of two-point non-linear boundary value problems in porous catalyst particles. **International Journal of Mathematical Archieve-3(3)**, 2012, pp. 810-821 (**Impact factor: 0.80**).
3. **V. Ananthaswamy**, L. Rajendran, Analytical solutions of some two-point non-linear elliptic boundary value problems, **Applied Mathematics** (3) 2012, pp.1044-1058 (**Impact factor 0.19**).
4. **V. Ananthaswamy**, A. Eswari and L. Rajendran, Non-linear reaction-diffusion process in a thin membrane and Homotopy analysis method. **International Journal of Automation and Control Engineering**, Vol. 2 (1), 2013, pp. 10-18.
5. **V. Ananthaswamy**, L. Rajendran, Analytical solution of non-isothermal diffusion-reaction processes and effectiveness factors. **ISRN – Physical Chemistry**, Vol. 2013, Article ID 487240, pp. 1-14.

6. **V. Ananthaswamy**, K. Chandrasekara Rao, On sequences in a Banach algebra, **Acta Ciencia Indica** 34M (2), 2008, pp.729-731.
7. **V. Ananthaswamy**, A. Eswari and L. Rajendran, Analytical solution of system of non-linear reaction diffusion-processes in a thin membrane: Homotopy perturbation approach, **Physical Chemistry- An Indian Journal**, Vol. 5 (2), (2010), pp.1-8
8. **V. Ananthaswamy**, SP. Ganesan and L. Rajendran, Approximate analytical solution of non-linear reaction-diffusion equation in microwave heating model in a slab: Homotopy analysis method, **International Journal of Mathematical Archive-4(7)**, 2013, pp. 178-189 (**Impact factor: 0.80**).
9. D. Shanthi, **V. Ananthaswamy** and L. Rajendran, Analysis of non-linear reaction-diffusion processes with Michaelis - Menten kinetics by a new Homotopy perturbation method, **Natural Science**, Vol.5, No.9, 2013, pp. 1034-1046 (**Impact factor : 0.33**).
- 10.K. Saravanakumar, **V. Ananthaswamy**, M. Subha and L. Rajendran, Analytical solution of non-linear boundary value problem for fin efficiency of convective straight fins with temperature dependent thermal conductivity, **ISRN –Thermodynamics**, Vol. 2013, Article ID 282481, pp. 1-8.
- 11.**V. Ananthaswamy**, SP. Ganesan and L. Rajendran, Approximate analytical solution of non-linear boundary value problem in steady state flow of a liquid film: Homotopy perturbation method, **International Journal of Applied Science and Engineering Research (IJASER)**, Vol.2 (5), 2013, pp.569-578.
- 12.**V. Ananthaswamy** and S. Mythili, A simple analytical expression of non-linear boundary value problem for steady state thermal criticality in viscous reactive flows through channels with a sliding wall, **International Journal**

- of Scientific Research**, Vol. 2 (2), 2014, pp.194-200 (**Impact factor: 1.8651**).
- 13.V. **Ananthaswamy** and R. Shanthakumari, Solution of the linear and non-linear differential equations by using Homotopy perturbation method, **Indian Journal of Applied Research** , Vol. 4 (2), 2014, pp.27-31 (**Impact factor: 2.1652**).
- 14.K.M. Dharmalingam, S. Kalaiselvi and **V. Ananthaswamy** Approximate analytical solution of Chemo attractant gradient sensing based on receptor-regulated membrane phospholipid signaling dynamics, **International Journal of Modern Mathematical Sciences (IJMMS)**, 9(3), 2014, pp. 173-197.
- 15.M. Subha, **V. Ananthaswamy** and L. Rajendran, A comment on Liao's Homotopy analysis method, **International Journal of Applied Science and Engineering Research (IJASER)**, Vol.3 (1), 2014, pp.177-186.
- 16.V. **Ananthaswamy**, S. Kala and L. Rajendran, Approximate analytical solution of non-linear initial value problem for an autocatalysis in a continuous stirred tank reactor: Homotopy analysis method, **International Journal of Mathematical Archive (IJMA)**, Vol. 5(4), 2014, pp.1-12(**Impact factor: 0.80**).
- 17.M. Subha, **V. Ananthaswamy**, and L. Rajendran, Approximate analytical solution of non-linear boundary value problem in electrohydrodynamic flow in a circular cylindrical conduit: Homotopy analysis approach, **International Journal of Automation and Control Engineering (IJACE)**, Vol.3 (2), 2014.
- 18.D. Shanthi, **V. Ananthaswamy** and L. Rajendran , Approximate analytical expressions of non-linear boundary value problem in an amperometric

- biosensor using new Homotopy perturbation method, **International Journal of Modern Mathematical Sciences (IJMMS) (In Press)**.
- 19.S. Mehala, **V. Ananthaswamy** and L. Rajendran, **Analytical solutions of fluorescent reporters to auxin in flux in plant cells**, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 3, Special Issue 3, March 2014, pp. 1382-1386 (**Impact factor: 1.672**).
- 20.**V. Ananthaswamy**, S. Mythili and L. Rajendran, **Approximate analytical expressions of thermal radiation effect on inherent irreversibility in a variable viscosity channel flow**, Proceedings of the National Conference on Mathematical Modelling and Applications, SSM Institute of Engineering and Technology, Dindigul, 28<sup>th</sup> March 2014 (**In press**) (**Impact factor: 1.7**).
21. **V. Ananthaswamy**, C. Chowmiya M. Subha, Approximate analytical solution of thermal criticality for a reactive third-grade liquid in a channel with isothermal walls: Homotopy analysis method, Proceedings of the National Conference on Mathematical Modelling and Applications, SSM Institute of Engineering and Technology, Dindigul, 2<sup>8th</sup> March 2014 (**In press**)(**Impact factor: 1.7**).
- 22.P. Felicia Shirly, **V. Ananthaswamy** and L. Rajendran, Analytical expressions for an electrochemical biosensor employing the enzymes glucose oxidase and horseradish peroxidase using the Homotopy perturbation method, **International Journal of Scientific and Engineering Research (Impact Factor: 1.4) (In press)**.
- 23.**V. Ananthaswamy** and C. Chowmiya, A simple analytical expression of a non-linear boundary value problem for an immobilized oxidase enzyme electrode in the presence of two oxidants using new Homotopy perturbation method, **Frontiers in Sensors, Science and Engineering Publishing (Communicated)**.



- 24.M. Subha ,**V. Ananthaswamy** and L. Rajendran, Comparison of Homotopy perturbation method and Recursive procedure for commensal-host ecological model with replenishment rate for both the species, **Indian Journal of Pure and Applied Mathematics (Communicated)**.
- 25.**V. Ananthaswamy**, S. Kala Approximate analytical solution of nonlinear boundary value problem in thermal engineering problems using Homotopy Analysis method, **Canadian Open Thermal Engineering Journal (Communicated)**.
- 26.**V. Ananthaswamy** and R. Shanthakumari, Simple analytical expressions of the non-linear reaction diffusion process in an immobilized biocatalyst particle using the New Homotopy perturbation method, **Review of Bioinformatics and Biometrics (Communicated)**.
- 27.**V. Ananthaswamy** and S. Mythili, Analytical expressions for thermal stability of a reactive hydromagnetic poiseuille fluid flow through a channel and Homotopy perturbation method, **Egyptian Journal Basic and Applied Science (Communicated)**.
28. SP. Ganesan, **V. Ananthaswamy** and L. Rajendran, Mathematical modeling and analysis of solid cancer growth with angiogenesis, **Advances in Medicine, Hindawi Publishing Corporation (Communicated)**.
- 29.**V. Ananthaswamy**, L. Rajendran, **Approximate analytical expressions of steady state Brusselator model using the Homotopy perturbation method**

**Particulars of M.Phil., Mathematics students under my guidance****Guide:** Dr. V. Ananthaswamy**Batch:** 2013-2014.

S. No.	Reg. No.	Name of the Student	M. Phil., thesis title	Public ations	Journal Name
1	2013 MLM 003	C. Chowmiya	Solving some nonlinear boundary value problems: An analytical approach.	2	1.FS (Communicated) 2.Discovery Journal
2	2013 MLM 004	S. Kala	Initial and Boundary value problems and Homotopy analysis method	2	1.IJMA 2. Canadian Open Thermal Engineering Journal (Communi)
3	2013 MLM 007	R.Shanthakumari	Solution of initial and boundary value problems using analytical and numerical simulation.	2	1.IJAR 2. RBB (communicated)
4	2013 MLM 013	S. Mythili	Application of the Homotopy perturbation method for solving physical science problems	2	1.IJSR 2. Discovery Journal

**Educational qualifications**

Degree	Name of the college/ School and location	University	Period attended From To	Area of Specialization	Class/ Rank/ percentage
Ph. D., (Part-time)	Madurai Kamaraj University	Madurai Kamaraj University	Nov 2009 to Oct 2013	<b>Some boundary value problems in reaction diffusion processes</b>	Date of Viva-voce 10.10.2013
M. Phil., (DLP)	Madurai Kamaraj University	Madurai Kamaraj University	Jan- 2001 to Nov 2002	----	69% First class
M. Sc.,	The Madura	Madurai	June 1998 to	Pure and applied	98%

	College	Kamaraj University	April 2000	Mathematics	First class First Rank
B. Sc.,	The Madura College	Madurai Kamaraj University	June 1995 to April 1998	-----	78.3% First class

### Teaching Experiences

Name of Institution and Place	Duration		Designation	Reasons for relieving
	From	To		
St. Michael College of Engineering and Technology, Kalayarkoil, Sivagangai District	31.07.2000	31.05.2001	Lecturer	Resigned
Kamaraj College of Engineering and Technology, Virudhunagar	01.06.2001	04.07.2003	Lecturer	Resigned
SASTRA University, Thanjavur	07.07.2003	31.05.2007	Lecturer	Resigned
Velammal College of Engineering and Technology, Madurai	01.06.2007	28.01.2008	Lecturer	Resigned
The Madura College (Autonomous), (permanent post)	21.02.2008	to till date	Assistant Professor	