

CURRICULUM VITAE

Ahmad Sami Bataineh

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1 PERSONAL DATA

Name	:	AHMAD SAMI BATAINEH
Academic Rank	:	Full Professor
Date & Place of Birth	:	10 October 1981, Irbid, Jordan
Sex	:	Male
Marital Status	:	Married
Nationality	:	Jordanian
Name of Current Employer	:	Al-Balqa Applied University–Jordan
Address	:	Department of Mathematics Faculty of Science
Telephone No.	:	+9- 62-775652336
Emails	:	a_s_bataineh@bau.edu.jo , a_s_bataineh@yahoo.com
Fields of Specialization	:	Mathematics
Major	:	Numerical/Mathematical Methods
Minor	:	Applied Mathematics
Google Scholar	:	https://scholar.google.com/citations?user=U3wSbi8AAAAJ&hl=en
Research Gate	:	https://www.researchgate.net/profile/Ahmad_Sami_Bataineh
ORCID ID	:	https://orcid.org/0000-0002-0105-6482
Researcher ID	:	F-8810-2017
Scopus Author ID	:	22935732100

2 RESEARCH INTEREST

My research focuses on Numerical Methods for Solving Differential Equations as Models in Sciences and Engineering. In the past few years I have worked on several methods such as Homotopy analysis method (HAM), Homotopy perturbation method (HPM), adomian decomposition method (ADM) and variational iteration method (VIM). Recently I have been increasingly working with a new technic based on the orthogonal Bernstein collocation method and others special functions to find approximate analytical solution.

3 ACADEMIC QUALIFICATIONS

- Doctor of Philosophy** : University Kebangsaan Malaysia (UKM), Bangi, Malaysia. 2009.
- Major** : Applied Mathematics
- Thesis Title** : Solutions of Several Ordinary and Partial Differential Equations by Homotopy Analysis Method and Its Modifications.
- Master of Science** : University Kebangsaan Malaysia (UKM), Bangi, Malaysia, July. 2006. Mathematics
- Major** : Pure Mathematics (course work and thesis)
- Thesis Title** : New Properties for Analytic Functions Involving Hadamard Product
- Bachelor of Science** : Jordan University of Science and Technology (JUST), Jordan, July 2004
- Major** : Mathematics.

4 UNIVERSITY COURSES TAUGHT

Please refer Table 1 on page 7.

5 HONORS, ACADEMICS AWARDS AND PATENT

- Award presented by Al-Balqa Applied University distinguished researcher in terms of the number of scientific citations.
- Ranked 185 on the level of all members of the faculty working in the Jordanian public and private universities on the level of the number of scientific citations. The University of Jordan made this classification.

6 RESEARCH PROJECTS

- SAGA STGL-011-2006. **Project leader (Prof. Ishak Hashim)**: Solving nonlinear problems of physics via semi-analytical methods. (RM 104,000.00). Sept 2006–Sept 2008. Universiti Kebangsaan Malaysia (UKM).
- GUP UKM-GUP-BTT-07-25-173. **Project leader (Prof. Ishak Hashim)**: Feedback control of instability of fluid layer. (RM 300,000.00). 1 Oct 2007–30 Jun 2010. Universiti Kebangsaan Malaysia (UKM).

7 EMPLOYMENT HISTORY

- Sep. 2006 – Sep. 2009** : Research Assistant Tutor, University Kebangsaan Malaysia (UKM).
- Sep. 2009 – Sep 2010** : Assistant Professor, Department of Mathematics, Irbid National University.
- Sep. 2010 – Sep. 2014** : Assistant Professor, Department of Mathematics, Al-Balqa Applied University-Jordan
- Sep. 2014 – Sep. 2019** : Associate Professor, Department of Mathematics, Al-Balqa Applied University-Jordan
- 26/Sep. 2019** : Full Professor, Department of Mathematics, Al-Balqa Applied University-Jordan
- Sep. 2011 – Sep. 2012** : Assistant Dean of Faculty of Science , Al-Balqa Applied University, Jordan
- Jun. 2012 – Aug. 2012** : Invited Professor, University Kebangsaan Malaysia (UKM).
- Jun. 2013 – July. 2013** : Invited Professor, University Kebangsaan Malaysia (UKM).

7.1 MEETING AND CONFERENCES

International/Regional

1. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2006. Solution of the Verhulst Equation Via the Homotopy Analysis Method. *Proceeding Simposium Kebangsaan Sains Matematik ke-15*.
2. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2008. On a new reliable modification of homotopy analysis method. *International Conference on Mathematical Sciences, 28-29 November 2007, Equatorial Hotel, Bangi, Malaysia*.
3. **A. Sami Bataineh***. Approximate solutions of eighth-order BVPs by homotopy analysis method and its modification. *Proceedings of the Chaos and Complex System 2010, Istanbul, Turkish, 2124 May 2010*.
4. **A. Sami Bataineh***. improved homotopy analysis method, *Morehouse college, Atlanta, Georgia, USA , 2528 May 2011*
5. **A. Sami Bataineh***. Novel method for solving singular two-point BVPs. *International Conference on Advancement in Science and Technology 2012 (iCAST) 2012, Kuantan, Malaysia*
6. M Alshbool, Ishak Hashim, **A. Sami Bataineh**. *IIER International Conference, New York, USA, 15th-16th April 2017, ISBN: 978-93-86083-34-0At: USA*
7. MOAATH N. OQIELAT, O. OGILAT, **A. Sami Bataineh**. Approximation of Radial Basis function with linear polynomial: Comparison and Application. *Proceedings of 170th The IIER International Conference, Sydney, Australia, 24th -25th June 2018*

8 PUBLICATIONS

8.1 Submitted

1. **A. Sami Bataineh***, Osman Rasit Isik, I. Hashim. Computational method based on n -dimensional Bernstein polynomials for fractional heat- and wave-like equations. on going to (submitted) .

8.2 Journals

1. **AS Bataineh***, Osman Rasit Isik, Abedel-Karrem Alomari, Mohammad Shatnawi, Ishak Hashim. An Efficient Scheme for Time-Dependent Emden-Fowler Type Equations Based on Two-Dimensional Bernstein Polynomials. MPDI, Mathematics, September 2020 DOI: 10.3390/math8091473. *ISI Web of Science*, Q1.
2. **AS Bataineh***, AA Al-Omari, OR Isik, I Hashim. 2019. Multistage Bernstein collocation method for solving strongly nonlinear damped systems. *Journal of Vibration and Control* 25 (1), 122–131. (SAGE, ISSN 1077-5463, 2017 **Impact Factor: 2.197**), *ISI Web of Science*, **Q1**
3. **AS Bataineh***. Bernstein Polynomials Method and its Error Analysis for Solving Nonlinear Problems in the Calculus of Variations: Convergence Analysis via Residual Function. *Filomat*, 32 (4), (2018), 13791393 Universitet of Nis, ISSN 2406-0933, 2017 **Impact Factor: 0.635**), *ISI Web of Science*, **Q3**
4. **AS Bataineh***, OR Isik, I Hashim. 2016. Bernstein method for the MHD flow and heat transfer of a second grade fluid in a channel with porous wall *Alexandria Engineering Journal*, 55 (3), 2149-2156 (Elsevier, ISSN 1110-0168, 2017 **SJR: 0.6**), *ISI Web of Science*, **Q1**
5. M.H.T. Alshbool, **A. S. Bataineh**, I. Hashim, Osman Rasit Isik. 2017. Solution of fractional-order differential equations based on the operational matrices of new fractional Bernstein functions. *Journal of King Saud University-Science*, 29 (1), 1-18 (Elsevier, ISSN 1018-3647, 2017 **SJR: 0.61**), *ISI Web of Science*, **Q1** .
6. **AS Bataineh***, 2017. Application of Adaptation HAM for Nonlinear Oscillator Typified as A Mass Attached to A Stretched Elastic Wire. *Communications in Mathematics and Applications* 8 (2), 157-165, *ISI Web of Science*
7. F Bani-Ahmad, AK Alomari, **AS Bataineh**, J Sulaiman, I Hashim. 2016. On the approximate solutions od systems of ODEs by Legender operational matrix od differentiation. *Italian Journal of Pure and Applied Mathematics*, 36 2016, 483-494, Forum Societa Editrice Universitaria Udinese srl, ISSN 1126-8042, 2017 **SJR: 0.2**), **Q4**
8. M.H.T. Alshbool, **A. S. Bataineh**, I. Hashim, Osman Rasit Isik. 2015. Approximate solutions of singular differential equations with estimation error by using Bernstein polynomials. *Int. J. Pure Appl. Math.* , 100 (1), 109-125 Academic Publications Ltd, ISSN 1311-8080, 2017 **SJR: 0.14**), SCOPUS **Q4**
9. AK Alomari, M Syam, MF Al-Jamal, **AS Bataineh***, NR Anakira, AF Jameel. Modified Legendre Operational Matrix of Differentiation for Solving Strongly Nonlinear Dynamical Systems. *Int. J. Appl. Comput. Math*, 4 (5), 117 (Springer, ISSN: 2349-5103, SCOPUS, SCI, Math Rev, Zentralblatt MATH.
10. **A Bataineh***, O Isik, N Aloushoush, N Shawagfeh. 2016. Bernstein Operational Matrix with Error Analysis for Solving High Order Delay Differential Equations *International Journal of Applied and Computational Mathematics*, 1-14. (Springer, ISSN: 2349-5103, SCOPUS, SCI, Math Rev, Zentralblatt MATH.
11. M.H.T. Alshbool, **A. S. Bataineh**, I. Hashim, Osman Rasit Isik. 2015. Approximate solutions of singular differential equations with estimation error by using Bernstein polynomials. *Int. J. Pure Appl. Math.* , 100 (1), 109-125 Academic Publications Ltd, ISSN 1311-8080, 2017 **SJR: 0.14**), SCOPUS **Q4**

12. Z. Odibat*, **A. Sami Bataineh**. 2014. An adaptation of homotopy analysis method for reliable treatment of strongly nonlinear problems: construction of homotopy polynomials. *Math. Methods Appl. Sci.* , 35, 991-1000 (John Wiley & Sons, ISSN 1099-1476, 2017 **Impact Factor: 1.18**), *ISI Web of Science*, **Q1** .
13. **A. Sami Bataineh***. 2014. Avoid the uncontrollability problems of the nonzero endpoint conditions via homotopy analysis method. *Int. J. Appl. Comput. Math*(Azerbaijan, ISSN 1683-3511, 2017 **Impact Factor: 2.365**), *ISI Web of Science*, **Q3**
14. Roslan, R., Saleh,H., Hashim, I., **A. Sami Bataineh**. 2014. Natural convection in an enclosure containing a sinusoidally heated cylindrical source. *Int. J. Heat Mass Transfer* , 70: 119-127 (Elsevier, ISSN 0017-9310, 2017 **Impact Factor: 3.891**), *ISI Web of Science*, **Q1**
15. **A. Sami Bataineh***. 2013. Novel method for solving singular two-point BVPs. *Journal of Physics: Conference Series*, 435 (1) , art. no. 012044.
16. Abu Arqub, O.,El-Ajou, A., **A. Sami Bataineh**, I. Hashim*. 2013. A representation of the exact solution of generalized Lane-Emden equations using a new analytical method. *Abstract Appl. Anal.* art. no. 378593. (Hindawi, ISSN 1085-3375, 2017 **Impact Factor: 1.145**), *ISI Web of Science*, **Q3**
17. A. K. Alomari*, Nidal Anakira, **A. Sami Bataineh** and Ishak Hashim. 2013. Approximate solution of nonlinear system of BVP arising in fluid flow problem. *Mathl. Probl. Eng.* , art. no. 136043. (Hindawi, ISSN 1024-123X, 2017 **Impact Factor: 1.145**), *ISI Web of Science*, **Q2** .
18. **A.S. Bataineh**, A.K. Omari, I. Hashim*. 2013. Approximate solutions of singular two-point BVPs using Legendre operational matrix of differentiation. *J. Appl. Math.* , Volume 2013: Article ID 547502 (6 pages) (Hindawi, ISSN 1110-757X, 2011 **Impact Factor: 0.656**), *ISI Web of Science*, **Q3**
19. Ghoreishi, M., Ismail, A., Alomari, A.K., **A. Sami Bataineh** A. 2012. The comparison between Homotopy Analysis Method and Optimal Homotopy Asymptotic Method for nonlinear age-structured population models. *Commun. Nonlinear Sci. Numer. Simulat.* , 17: 1163–1177. (Elsevier, ISSN: 1007-5704, 2017 **Impact Factor: 3.181**), *ISI Web of Science*, **Q1**
20. **A. Sami Bataineh***. 2011. Approximate solutions of eighth-order BVPs by homotopy analysis method and its modification. *Journal of Applied Functional Analysis* 6: 173–181 (Eudoxus Press, LLC, Cordova, TN, ISSN: 1559–1948)
21. **A. Sami Bataineh***, I. Hashim, S. Abbasbandy, M.S.M. Noorani. 2011. Direct Solution of Singular Higher-order BVPs by the Homotopy Analysis Method and its Modification. *World Applied Sciences Journal* 12 (6): 884–889. (IDOSI Publications ISSN: 1818–4952), *ISI Web of Science*.
22. O. Abdulaziz, **A. Sami Bataineh**, I. Hashim*. 2010. On convergence of homotopy analysis method and its modification for fractional modified KdV equations. *J. Appl. Math. Comput.* , 33: 61–81. (Springer, ISSN 1598-5865, **SJR: 0.45**), *ISI Web of Science*, **Q3**
23. **A. Sami. Bataineh**, M.S.M. Noorani, I. Hashim. 2009. Homotopy analysis method for singular IVPs of Emden-Fowler type. *Commun. Nonlinear Sci. Numer. Simulat.* 14: 1121–1131. (Elsevier, ISSN: 1007-5704, 2017 **Impact Factor: 3.181**), *ISI Web of Science*, **Q1**
24. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2009. On a new reliable modification of homotopy analysis method. *Commun. Nonlinear Sci. Numer. Simulat.* 14: 409–423. (Elsevier, ISSN: 1007-5704, 2017 **Impact Factor: 3.181**), *ISI Web of Science*, **Q1**

25. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2009. Modified homotopy analysis method for solving systems of second-order BVPs. *Commun. Nonlinear Sci. Numer. Simulat.* 14: 430–442. (Elsevier, ISSN: 1007-5704, 2017 **Impact Factor: 3.181**), *ISI Web of Science*, [Q1](#)
26. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2009. Solution of fully developed free convection of a micropolar fluid in a vertical channel by homotopy analysis method. *Int. J. Numer. Meth. Fluids* 60: 779–789. (John Wiley & Sons, ISSN 0271-2091, 2017 **Impact Factor: 1.673**), *ISI Web of Science*, [Q1](#)
27. **A.Sami. Bataineh**, A.K. Alomari, M.S.M. Noorani, I. Hashim, R. Nazar. 2009. Series solutions of systems of nonlinear fractional differential equations. *Acta Appl. Math.* 105: 189–198. (Springer, ISSN 0167-8019, 2017 **Impact Factor: 0.910**), *ISI Web of Science*, [Q2](#)
28. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2009. Analytical treatment of generalized Burgers-Huxley equation by homotopy analysis method. *Bull. Malays. Math. Sci. Soc.* 32: 233–243. (Springer, ISSN 0126-6705, 2017 **Impact Factor: 0.804**), *ISI Web of Science*, [Q2](#)
29. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim. 2009. Direct solution of n th-order IVPs by homotopy analysis method. *Diff. Eqn. Nonlin. Mech.* vol. 2009, Article ID 842094, 15 pages. (ISSN 1687-4099, SCOPUS), H3
30. **A. Sami Bataineh**, M.S.M. Noorani*, I. Hashim. 2008. Solving systems of ODEs by homotopy analysis method. *Commun. Nonlinear Sci. Numer. Simulat.* 13: 2060–2070. (Elsevier, ISSN: 1007-5704, 2017 **Impact Factor: 3.181**), *ISI Web of Science*, [Q1](#) (**Top 25** Hottest Articles, Physics and Astronomy, Communications in Nonlinear Science and Numerical Simulation, April - June 2008)
31. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim*. 2008. Approximate analytical solutions of systems of PDEs by homotopy analysis method. *Comput. Math. Appl.* 55: 2913–2923. (Elsevier, ISSN 0898-1221, 2017 **Impact Factor: 1.860**), *ISI Web of Science*, [Q1](#) (**Top 25** Hottest Articles, Mathematics, Computers & Mathematics with Applications, April - June 2008)
32. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim*. 2008. The homotopy analysis method for Cauchy reaction-diffusion problems. *Phys. Lett. A* 372: 613–618. (Elsevier, ISSN 0375-9601, 2017 **Impact Factor: 1.863**), *ISI Web of Science*, [Q1](#)
33. **A. Sami. Bataineh**, M.S.M. Noorani, I. Hashim*. 2008. Approximate solutions of singular two-point BVPs by modified homotopy analysis method. *Phys. Lett. A* 372: 4062–4066. (Elsevier, ISSN 0375-9601, 2017 **Impact Factor: 1.863**), *ISI Web of Science*, [Q1](#)
34. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim*. 2008. Series solutions of the multispecies Lotka-Volterra equations by means of the homotopy analysis method. *Diff. Eqn. Nonlin. Mech.* 2008: Article ID 816787, 14 pages doi:10.1155/2008/816787 (ISSN 1687-4099, SCOPUS), H3
35. **A. Sami Bataineh**, M.S.M. Noorani, I. Hashim*. 2007. Solutions of time-dependent Emden-Fowler type equations by homotopy analysis method. *Phys. Lett. A* 371: 72–82. (Elsevier, ISSN 0375-9601, 2017 **Impact Factor: 1.863**), *ISI Web of Science*, [Q1](#) (**Top 25** Hottest Articles, *Phys. Lett. A* Oct–Dec 2007)

9 International Referee/Reviewer

Please refer Table 2 on page 8.

Table 1: Courses Taught

Services Courses	Specialized Courses
Pre-Calculus	Linear Algebra I
Calculus I	Linear Algebra II
Calculus II	Partial Differential Equations I
Calculus III	Partial Differential Equations II
Linear Algebra and Numerical Analysis	Numerical Analysis I
Ordinary Differential Equations I	Numerical Analysis II
Engineering Mathematics I	Computations in Applied Mathematics
Engineering Mathematics II	Special Functions and Fourier Analysis
Discrete Mathematics	Mathematical Programming Packages: Mathematica, Mathcad, Maple
	Special Topics in applied mathematics
	Logic and Set Theory

Table 2: **International Referee/Reviewer.**

<i>Central Euro. J. Phys.</i> (Versita & Springer Verlag)	<i>Chem. Eng. Commun.</i> (Taylor & Francis)
<i>J. Comput. Appl. Math.</i> (Elsevier)	<i>Nonlin. Analy.: Real World Appl.</i> (Elsevier)
<i>Mathl. Probl. Eng.</i> (Hindawi)	<i>Comp. Phys. Commun.</i> (Elsevier)
<i>J. Appl. Math. Comput.</i> (Springer)	<i>Phys. Lett. A</i> (Elsevier)
<i>Int. J. Comput. Math.</i> (Taylor & Francis)	<i>Int. J. Numer. Meth. Engng.</i> (John Wiley & Sons)
<i>Diff. Eqn. Nonlin. Mech.</i> (Hindawi)	<i>Acta Appl. Math.</i> (Springer)
<i>Comput. Math. Appl.</i> (Elsevier)	<i>Phys. Scr.</i> (IOP)
<i>Appl. Math. Lett.</i> (Elsevier)	<i>Diff. Eqn. Nonlin. Mech.</i> (Hindawi)
<i>Phys. Lett. A</i> (Elsevier)	<i>Nonlin. Analy.: Real World Appl.</i> (Elsevier)
<i>Mathl. Comput. Model.</i> (Elsevier)	<i>J. Porous Media</i> (Begell)
<i>Int. J. Heat Mass Transfer</i> (Elsevier)	<i>Mathl. Comput. Model.</i> (Elsevier)
<i>Int. J. Comput. Math.</i> (Taylor & Francis)	<i>J. Comput. Appl. Math.</i> (Elsevier)