Academic Curriculum Vitae

Personal Information:

Full Name: Waleed Hussain Aziz

Academic Title: PhD, assistant professor

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Mobile: +964(0)7504482514

Education:

B.Sc., Salahaddin University -Erbil, College of Science, Mathematics Department, Iraq.

M.Sc., Salahaddin University -Erbil, College of Science, Mathematics Department, Iraq.

PhD, Plymouth University, Faculty of Science and Technology, School of computing and Mathematics, United

Kingdom.

Employment:

January 1999 - now: Mathematics Department, College of Science, Salahaddin University-Erbil

2010-2013: Demonstrator and marker at Plymouth University, Faculty of Science and Technology, School of computing and Mathematics, United Kingdom.

Qualifications

GTA course in Plymouth University-UK.

Teaching experience:

Undergraduate: Ordinary Differential Equations, Theory of Ordinary Differential Equations, Partial Differential

Equations, Discrete Mathematics, Calculus, Finite Mathematics, Computer Program Languages.

Postgraduate: Integrability of Differential systems, Integral Aspects of Differential Equations, LaTeX Package.

Research and publications

1) W. H. Aziz and A. I. Amen. *Multiplicity of Periodic Solutions by Word Problems,* J. Zanco. Pure & Applied Scince, Salahaddin University, V 16, No.1 (2004),73-82.

2) Azad I. Amen, Rizgar H. Salih and Waleed H. Aziz. *Hopf Bifurcation Analysis for Stability Nontrivial Critical Points of the Rössler's Second System. J. of Koya University, 12 (2009).*

3) Waleed Aziz and Colin Christopher. Local Integrability and Linearizability of Three-dimensional Lotka–Volterra Systems. Journal of Applied Mathematics and Computation, 219 (2012), 4067-4081. https://doi.org/10.1016/j.amc.2012.10.051.

4) Waleed Aziz, Jaume Llibre and Chara Pantazi. Centers of quasi-homogeneous polynomial differential equations of degree three. Advances in Mathematics, Volume 254, 2014, 233–250. https://doi.org/10.1016/j.aim.2013.12.006.

5) Waleed Aziz. Integrability and Linearizability of three Dimensional Vector Fields. Qualitative Theory of Dynamical Systems, Volume 13, Issue 2, 2014, 197-213. https://doi.org/10.1007/s12346-014-0113-0.

6) Waleed Aziz, Colin Christopher, Jaume Llibre and Chara Pantazi. Local Analytic First Integrals of Three-dimensional Lotka-Volterra systems with 3:-1:2–Resonance. Mediterranean Journal of Mathematics (2021)
18:167, https://doi.org/10.1007/s00009-021-01809-2.

7) Waleed Aziz and Colin Christopher. On the integrability of some three-dimensional Lotka-Volterra equations with rank-1 resonances. Publicacions Matemàtiques. Volume EXTRA (2014), 37-48. DOI: 10.5565/PUBLMAT_Extra14_02

8) Waleed Aziz and Colin Christopher. Three dimensional vector fields with Liouvillian first integrals. In preparation.

9) Waleed Aziz and Colin Christopher. The monodromy method and integrability of three dimensional vector fields of Lotka–Volterra type. In preparation.

10) Waleed Aziz. Integrability and Linearizability Problems of Three Dimensional Lotka–Volterra Equations of Rank-2. Qualitative Theory of Dynamical Systems (2019) 18:1113–1134. https://doi.org/10.1007/s12346-019-00329-5.

11) Waleed Aziz, Azad Ameen & Chara Pantazi. Integrability and linearizability of a family of three-dimensional
quadratic systems. Dynamical Systems, An International Journal (2021). https://doi.org/10.1080/14689367.2021.1893661.

12) Azad Ameen and Waleed Aziz. Qualitative analysis for general Sel'kov model. AIP Conference Proceedings 2096, 020012 (2019); https://doi.org/10.1063/1.5097809.

13) Chiman Qadir, Waleed Aziz, Ibrahim Hamad. Non-existence of polynomial first integrals of a family of three dimensional differential systems. Palestine Journal of Mathematics Vol. 12 (Special Issue I)(2023) , 59–72.

14) Chiman Qadir, Waleed Aziz, Ibrahim Hamad. Rank two integral aspects of three dimensional Lotka-Volterra
equations with nonstandard analysis. Differ Equ Dyn Syst (2023). https://doi.org/10.1007/s12591-023-00664-9.

15) Evan Sulaiman, Azad Amen, Waleed Aziz. Integrability of Forest-Pest model. Rend. Istit. Mat. Univ. Trieste Vol. 55 (2023), Art. No. 3, 27 pages. DOI: 10.13137/2464-8728/35484.

16) Existence Canard Solutions for Four Dimensional Hindmarsh-Rose Model with Respect to Infinitesimal Parameter. *Zanco Journal of Pure and Applied Sciences*, 36(2), 96–106. https://doi.org/10.21271/ZJPAS.36.2.9

17) Dana A. Mohammedameen, Kawa M.A. Manmi, Waleed H. Aziz. Modelling Radial Oscillations of a Bubble in a Spherical Liquid-Filled Elastic Solid. ZJPAS (2022), 34(6);20-27. http://dx.doi.org/10.21271/ZJPAS.34.6.3.

Conferences and courses attended

• 2011: Biannual European conferences on theoretical aspects of differential equations, Local integrability
of three dimensional Lotka-Volterra systems. Equadiff August 1-5, 2011, Loughborough University,
Loughborough, UK. Oral presentation.

• 2011: Advances in Qualitative Theory of Differential Equations, Local integrability of three dimensional
Lotka-Volterra systems. Castro Urdiales, Spain 2011-12-16 September. Poster presentation.

• 2012: Dynamical systems seminar, CRM, UAB, Local integrability and linearizability of three dimensional
Lotka-Volterra systems. Barcelona, Spain 2012-06-21 September. Oral presentation.

• 2018: Member of Scientific committee of the national conference of pure and applied mathematics and
mathematics education (NCPAME-2018) which was held on February 11-12, 2018 in Erbil, Faculty of
Education of Tishk University.

• 2019: Presentation, Integrability and Linearizability of Family of Three Dimensional Vector Fields.
Gathering Kurdish Mathematics Researchers: meeting with Caucher Birkar, April 1-2, 2019. Department
of mathematics, college for Science, Salahaddin University-Erbil.

• 2023: Online presentation, Integrability Aspects of Three Dimensional Vector Fields. 1st KMS Workshop

on Applied Mathematics, May 07-09, 2023.

Professional memberships

• Mathematical Review (MathSciNet), USA.

Professional Social Network Accounts:

• https://www.researchgate.net/profile/W-Aziz-2

• https://www.linkedin.com/feed/

• https://scholar.google.com/citations?user=7imp4AkAAAAJ&hl=en

Research interests

Analytic and Algebraic aspects of Integrability, Darboux Theory of Integrability, Liouvillian Integrability, Linearizability, Application of Monodromy Argument, Topics around Hilbert's 16th Problem, Algebraic Computational.

Other academic activities

• I did collaboration with Jaume Llibre and Chara Pantazi in Barcelon-Spain for two months

in UBA and Polytechnic University of Catalonia.

• 2011- 2013 demonstrating at Plymouth university

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• I did PhD VIVA for four postgraduate students.

• I also did MSc VIVA for seven postgraduate students.

• I supervised three MSc students.

• I supervised one PhD student.

• I currently supervise one PhD student.