

Academic Curriculum Vitae



Personal Information:

Full Name: **Waleed Hussain Aziz**
Academic Title: PhD, assistant professor
Email: waleed.aziz@su.edu.krd
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.

Research and publications

- 1) W. H. Aziz and A. I. Amen. *Multiplicity of Periodic Solutions by Word Problems*, J. Zanco. Pure & Applied Science, 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](https://doi.org/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. To appear in *Differential Equations and Dynamical Systems*.

15) Evan Sulaiman, Azad Amen, Waleed Aziz. Integrability of Forest-Pest model. To appear in RIMUT.

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 Riveiw, USA.
- Math editor in ZANCO Journal of Pure and Applied Sciences.

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
- 2011- 2013 marking at Plymouth university.
- I did PhD VIVA for two postgraduate students.
- I also did MSc VIVA for four postgraduate students.
- I supervised two MSc students.
- I currently supervise one MSc and two PhD students.