

**Azad Ibrahim Amen**

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## **EDUCATION**

**PhD in applied mathematics (Differential Equations and Dynamical Systems),  
2009-2011.**

**University of Salahaddin-Erbil –Iraq.**

**Dissertation title: “Periodic solutions and Darboux first integrals of polynomial  
systems)**

**Masters of Mathematics (Differential Equations),University of Baghdad, Iraq,  
1989–1991.**

**Bachelor of Mathematics. University of Salahaddin-Erbil –Iraq, 1984–1988.**

## **Appointments**

**University of of Salahaddin-Erbil –Iraq**

**1992 . Assistant lecture, Department of mathematics, college of Education.**

## **Academic Positions**

**Professor (2015) Salahaddin University, Iraq.**

**Assistant Professor (2005) Salahaddin University, Iraq.**

**lecture ( 1998 ) College of Education – Salahaddin University, Iraq.**

Head of Mathematics Department (2002 – 2008 and 20012-2017), College of Basic Education Salahaddin University, Iraq.

## **KEY SKILLS & EXPERTISE**

- Experienced in teaching undergraduate: Ordinary Differential Equations, Partial Differential Equations, Calculus, Linear Algebra, Finite Mathematics, Complex analysis.
- Experienced in teaching Postgraduate: Stability theory, bifurcation theory, theory of ordinary differential equations, advance linear algebra and dynamical systems.
- Good information and skills to find a solution of mathematics problems.
- Dependable and trustworthy with a high awareness to detail.
- Comprehensive working information of a field of IT flanks inclusive Microsoft Office, Excel and MAPLE programming.
- Speedy to develop powerful working relationships and to part with multifunctional teams.

## **Supervision:**

I have supervised eight M.Sc. students and one PhD student.

## **Publications Refereed Papers**

1.The sufficient conditions for the existence and non-existence of positive periodic solutions for polynomial scalar differential equations . J.Dohok,Uni,vol 15,no1(2012).<http://web.uad.ac>

2.The number of  $w$ -Periodic solutions of non-autonomous first order polynomial differential equations. J.Koya Uni. no 23, 2012,65-76.ISSn.2073-0713. <http://web.uad.ac>

- 3.Hopf bifurcation analysis for stability nontrivial critical points of the Rosslers second system,J.Koya University,no12(2009)77-95.**
- 4.Limit cycles of Lorenz system with Hopf bifurcation,J.AIRafdin, Mosul University, vol 5,no1(2008)81-99.www.AL-RAFIDEN.org. ISSN 1815-4816.iasj.net/iasj?func**
- 5.The number of periodic solutions of Riccati type logistic periodic equation .J.Zankoy Sulaimani,vol 7,no1(2004),25-29.**
- 6.Periodic solutions related to a Poincare map.J.Dohuk University, vol2,no1(2004)44-48.**
- 7.Multiplicity of periodic solutions by word problems,Zanco J.pure& applied Scince,Salahaddin University ,vo16,no1(2004)73-82.**
- 8.On periodic solutions of nonautonomous differential equations,J.Duhok University Vol 3,no2(2000)35-39.**
- 9.The computations of Lyndon factorization of words .J.Duhok University Vol 2,no2(2003)35-48.**
- 10.Word problems related to a center of two dimensional system, J.Zanco, Salahaddin University. Vol.10 ,no1(1998)51-54.**
- 11.Conditions for the quartic nonautonomous equations to have a center. J.Zanco.SalahaddinUniversity,Special issue2(1997)307-311.**
- 12.Word problems related to quartic nonautonomous equations, J.Zanco. SalahaddinUniversity,Special issue2(1997)243-252.**
- 13.On the centers of generalized Abel equation.to appear in J.Zankoy Sulaimani (2013).zancojournals.su.edu.krd**
- 14.Some propositions of a Hopf bifurcation behavior of the Tobin Benhabib-Miyao system.Zacco. J.pure& applied Science, Salahaddin University.V.25, no 2,2013. ISSN 2218-0230.**

**16. On Limit Cycles of Planar Dynamical System Via Dulac-Cherkas Function, Journal of Zankoy Sulaimani, Vol.(17), No.(2), (2015).ISSN:1812-4100.www.jzs.uos.edu.krd.**

**17. Isochronous center conditions for non homogenous rigid systems. Zanco. J.pure& applied Science, Salahaddin University.V26 no.2,2014.ISSN 2218-0230 .www. academia.edu**

**18. Inverse integrating factors of cubic polynomial system. J.Garmyan university. Vol 1,2015,156-164.ISSN 2310-0087.**

**19. Polynomial Inverse integrating factors of cubic systems. J.Dohuk university, vol 18, no 1 2015.**

**20. ON EXISTENCE INVERSE INTEGRATING FACTORS AND FIRST INTEGRALS FOR CUBIC IN 2D AUTONOMOUS DIFFERENTIAL.to appear . Zacco. J.pure& applied Science, Salahaddin University.2018 .**

**21. Qualitative analysis for general Sel'kov model. Cite as: AIP Conference Proceedings 2096, 020012 (2019); <https://doi.org/10.1063/1.5097809> Published Online: 09 April 2019.**

**22. Hussein, N.H. and Amen, A.I., 2019. Zero-Hopf Bifurcation in the Generalized Stretch-Twist-Fold Flow. *Sultan Qaboos University Journal for Science [SQUJS]*, 24(2), pp.122-128.**

23. MUHAMMAD, S.F., Hussein, N.H. and Amen, A.I., 2020. Darboux and Analytic First Integrals of Kingni–Jafari System with Only One Stable Equilibrium Point. *Zanco Journal of Pure and Applied Sciences*, 32(3), pp.1-9.

24. Jalal, A.A., Amen, A.I. and Sulaiman, N.A., 2020. Darboux integrability of the simple chaotic flow with a line equilibria differential system. *Chaos, Solitons & Fractals*, 135, p.109712.

## **Working Papers (Unpublished and Under Review)**

**1. Integrability of modifying Van der Pol-Duffing oscillator system in three-dimensions.**

**2. A note on the Darboux integrability of Falkner-Skan equation**

**3. Integrability, commutators and linearization of isochronous center for some planar rigid systems.**

**4. Integrability and Linearizability of a Family of Three-dimensional Quadratic Systems.**

## **Conferences and Workshops**

**1. Diversity education and international educational research. Friedrich-Alexander university Erlangen –Nurnberg-German- from 25 June until 8<sup>th</sup> of July 2018.**

**2. Capacity Building in Teacher Education and Research, Salahaddin University-Erbil, Kurdistan, Iraq, August 28th - 29th**

**2017.**

**3. Capacity building in teacher education and research.-workshop. Leipzig -Germany from 8-10-2015-25 until 23-10-2015.**

**4. The First Iraqi-French Mathematics Conference in cooperation with College of Science, Salahaddin University-Erbil, Erbil, 14th - 18th November, 2009.**

**5. SPS program 1/7-2002-1/8/2002 –center I.T- Salahaddin university**

**6. I.T and Excel programs 1/7/2001-1/8/2001- College of Education- Salahaddin university.**

**7. The Second Mathematics Conference in Salahaddin University-Erbil. Iraq, 1997.**

## **REFERENCES**

**1. Professor Dr .M.A.M. Alwash Department of Mathematics, West Los Angeles College, 9000 Overland Ave, Culver City, CA 90230-3519, USA.**

E-mail address: [alwashm@wlaac.edu](mailto:alwashm@wlaac.edu)

**2. . Professor Dr. Nejmaddin A. sulaiman . Department of Mathematics, college of education, Salahaddin University, Erbil, Iraq.**

**email:** [gardy.muhamad@yahoo.com](mailto:gardy.muhamad@yahoo.com)

**3.Dr. Waleed H. Aziz. Department of Mathematics.**

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