Ayman Ali Arafa

Curriculum Vitae

Personal Data

Full Name	**Ayman Ali Arafa Abdellah**
Nationality	Egyptian
Address	Mathematics Department, Faculty of Science, Sohag University, Sohag, Egypt
Date of Birth	27 May 1988
Mobiles	+201065667754
Email	ayman-arafa@science.sohag.edu.eg; ayman.arafa@ejust.edu.eg
major specialization	**Dynamical Systems**
Current position	**Assistant Professor**
Homepage	Please Click Here
Scopus	Please Click Here
Orcid	Please Click Here
Google Scholar	Please Click Here
Research Gate	Please Click Here

Research Interest

Dynamical Systems; Time delay; Mathematical Modeling; Bifurcations; Filippov systems.

Scopus Information's

Scopus ID	No. of articles in Scopus	Citations in Scopus	h-index in Scopus
56983134900	16	326	11

Teaching(Undergraduate Courses)

Calculus I, II, Ordinary Differential Equations, Partial Differential Equations, Probability, Special Functions, Algebra, Complex Analysis, Geometry and Mechanics.

Teaching (Graduate Courses)

Dynamical Systems, Mathematical Modeling; Special Functions.

Education

2013 **Master Degree in Science , Mathematics Department**, *Sohag University*, Sohag, *Egypt*

Master Thesis

Title *On Passive Control Method of Complex Nonlinear Systems.*
Supervisors Prof. Gamal M. Mahmoud and Dr. Emad E. Mahmoud

Ph. D. Thesis

Title *On Complex Nonlinear Systems with Time Delay*
Supervisors Prof. Dr. Gamal M. Mahmoud, Prof. Dr. Mahmoud A. Abul-Ez and Dr. Emad E. Mahmoud

Awards

2019 I was awarded the Prof. Bahaa-Eddin Helmy Ismail's Prize from Egyptian Mathematical Society as the best PhD thesis in Mathematics.

2014 I was awarded the Prof. Bahaa-Eddin Helmy Ismail's Prize from Egyptian Mathematical Society as the best Master thesis in Mathematics.

Languages

Arabic Native
English Very Good

Computer Skills

Excellent

Social skills

Excellent

Publications

1. Ayman A. Arafa, Soliman A. A. Hamdallaa, Sanyi Tang, Yong Xu and Gamal M. Mahmoud. Dynamics analysis of a Filippov pest control model with time delay. Communications in Nonlinear Science and Numerical Simulation, 101, 105865 (2021)
2. Soliman A. A. Hamdallaa, Ayman A. Arafa, Sanyi Tang and Yong Xu. Complex Dynamics of a Filippov three-species food chain model. International Journal of Bifurcation and Chaos, 31(5), 2150074 (2021)
3. Fathalla A. Rihan, Ayman A. Arafa, R. Rakkiyappan, C. Rajivganthi and Yong Xu. Dynamics

of fractional-order delay differential model of hepatitis C virus infection with $INF-\alpha$ treatment. Alexandria Engineering Journal 60(5), 4761-4774 (2021).

4. Ayman A. Arafa, Yong Xu and Gamal M. Mahmoud, Chaos suppression via integrative time delay control. International Journal of Bifurcation and Chaos, 30(14), 2050208 (2020).

5. Gamal M. Mahmoud, Ahmed A. Farghalya, Tarek M. Abed-Elhameeda, Shaban A. Aly, and Ayman A. Arafa. Dynamics of distributed-order hyperchaotic complex van der Pol oscillator and its synchronization and control. The European Physical Journal Plus 135, 32 (2020).

6. Aceng Sambas, Mustafa Mamat, Ayman A. Arafa, Gamal M. Mahmoud, Muhammad Afendee Mohamed, W. S. Mada Sanjaya. A new chaotic system with line of equilibria: dynamics, passive control and circuit design. International Journal of Electrical and Computer Engineering 9, 2365-2376 (2019).

7. Gamal M. Mahmoud, Ayman A. Arafa and Emad E. Mahmoud. On phase and anti-phase combination synchronization of time delay nonlinear systems. Journal of Computational and Nonlinear Dynamics 13, 111001 (2018).

8. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. Synchronization of time delay systems with non-diagonal complex scaling functions. Chaos, Solitons & Fractals 111, 86-95 (2018).

9. Gamal M. Mahmoud, Ayman A. Arafa and Emad E. Mahmoud. Bifurcations and chaos of time delayed Lorenz system with dimension 2n+1. The European Physical Journal Plus 132, 461 (2017).

10. Gamal M. Mahmoud, Ayman A. Arafa, Tarek M. Abed-Elhameed and Emad E. Mahmoud. Chaos control of integer and fractional orders of chaotic Burke-Shaw system using time delayed feedback control. Chaos, Solitons & Fractals 107, 680-692 (2017).

11. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. Projective synchronization for coupled partially linear complex-variable systems with known parameters. Mathematical Methods in the Applied Sciences 40, 1214-1222 (2017).

12. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. On modified time delay hyperchaotic complex Lü system. Nonlinear Dynamics 80, 855-869 (2015).

13. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. On projective synchronization of hyperchaotic complex nonlinear systems based on passive theory for secure communications. Physica Scripta 87, 055002 (2013).

14. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. Controlling hyperchaotic complex systems with unknown parameters based on adaptive passive method. Chinese Physics B 22, 060508 (2013).

15. Gamal M. Mahmoud, Emad E. Mahmoud and Ayman A. Arafa. Passive control of n-dimensional chaotic complex nonlinear systems. Journal of Vibration and Control 19, 1061-1071 (2013).