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Dr. Nabil Shawagfeh is a Professor of Mathematics in the University of Jordan. He holds a bachelor's degree in Mathematics from the University of Jordan (1977), a master's degree in Mathematics from the University of Jordan (1979), He has completed his PhD dissertation in Mathematics from Clarkson University-USA (1983). In the last 25 years he held the following positions: Chairman of Mathematics Dept "University of Jordan", Dean of Academic Research "University of Jordan", Vice-President for Academic Affairs "University of Jordan" , In 2008 – 2012 he held the post of President of Al al-Bayt University in Jordan. Then President of Al-balqa' Applied University in 2012-2016. During his carries he was involved as a chair and a member of several, administrative, Accreditation, Academic, as well as Scientific research committee and councils on the universities and on the national levels. During his academic carrier, he supervised 23 PhD and 21 M.Sc. thesis and published more than 65 publications.

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Publication for the past five years (2017-2021)

- 1- A study on the convergence conditions of generalized differential transform Method. **Mathematical Methods in the Applied Sciences** (2017). 40 (1), 40-48. (With ZM Odibatm S Kumar, T Hayat)
- 2- Bernstein Operational Matrix with Error Analysis for Solving High Order Delay Differential Equations. **Int.J.Appl. Comput.** (2017). 3 (3):1749-1762. (With A. Bataineh, O. Isik, N. Aloushoush)
- 3- Universal chaos synchronization control laws for general quadratic discrete systems . **Applied Mathematical Modelling** (2017) . 45, 636-641 (With A Ouannas, A Odiat, A Alsedi, B Ahmad).
- 4- Application of reproducing kernel algorithm for solving Dirichlet Time-fractional diffusion-Gordon types equations in porous media. **Journal of porous Media** (2019). 22(4):411-434. (With OA Arqub)
- 5- Solving optimal control problems of fredholm constraint optimality via the RKHSM with error estimates and convergence analysis. **Mathematical Methods in the Applied Sciences** (2019)doi 10.1002/mma.5530 (With OA Arqub)
- 6- Conformable fuzzy fractional differential equations: Existence, uniqueness, and characterization theorem. **Italian Journal of pure and Applied mathematics** (2019).(With Wardah Al-Awasa, OA Arqub)
- 7- Fitted spectral Tau Jacobi technique for solving certain classes of fractional differential equations. **Appl. Math and Information Sciences** (2019). 13 (6), 979-987. (With AA Al-nana, OA Arqub, M Al-Smadi).

- 8- A new Q–S synchronization results for discrete chaotic systems
Differential Equations and Dynamical Systems (2019). 27 (4), 413-422.
(With A Ouannas, Z Odibat,)

- 9 - Well-posedness of the inverse problem of time fractional heat equation in the sense of the Atangana-Baleanu fractional approach.
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- 10- An optimized linearization-based predictor-corrector algorithm for the numerical simulation of nonlinear FDEs **Physica Scripta** (2020). 95 (6), 06520.
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- 11- On Two-Dimensional Fractional Chaotic Maps with Symmetries
Symmetry (2020) . 12 (5), 756.
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- 12- Synchronization Methods for the Degn-Harrison Reaction-Diffusion Systems
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- 13- A new mathematical model for the glycolysis phenomenon involving Caputo fractional derivative: Well posedness, stability and bifurcation.
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- 14- Global synchronization of fractional-order and integer-order N component reaction diffusion systems: application to biochemical models
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- 15- A novel continuous genetic algorithm technique for the solution of partial differential equations. **Italian Journal of Pure and Applied Mathematics** (2021). 45 pp. 216-236.
(With RB Albadarneh, Z Abo-Hammour, O Alsmadi)

- 16-The Tikhonov regularization method for the inverse source problem of time fractional heat equation in the view of ABC-fractional technique. **Physica Scripta** (2021). Volume 96 (9) 094006
<https://doi.org/10.1088/1402-4896/ac0867>
(With S Djennadi, MS Osman, JF Gómez-Aguilar, OA Arqub)
- 17- Nonlinear dynamics and chaos in Caputo-like discrete fractional Chen system. **Physica Scripta**. (2021) Volume 96 (9) 095219
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(With S Azil, Z Odibat)
- 18- Solving optimal control problems of Fredholm constraint optimality via the reproducing kernel Hilbert space method with error estimates and convergence analysis. **Mathematical Methods in the Applied Sciences**. (2021) 44 (10), 7915-7932
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- 19- A fractional Tikhonov regularization method for an inverse backward and source problems in the time-space fractional diffusion equations. **Chaos, Solitons and Fractals**. Volume 150, September 2021, 111127
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- 20- Non-existence of global solutions for certain class of fractional evolution equations. (2021). **Applicable Analysis**,
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- 21- A numerical algorithm in reproducing kernel-based approach for solving the inverse source problem of the time-space fractional diffusion equation **Partial Differential Equations in Applied Mathematics** Volume 4, December 2021, 100164.
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22- Synchronization methods for chaotic systems involving fractional derivative with a non-singular kernel. **Journal of Applied Nonlinear Dynamics** (2022). 11(2), 377-388 (Accepted)
(With F Mesdoui, A Ouannas)

23- Well-Posedness of General Time-Fractional Diffusion Equations Involving Atangana-Baleanu Derivative. **Progress in Fractional Differentiation and Applications**. (Accepted)
(With Soraya Abdelaziz1, Mohammed Al-Refai)