

Curriculum Vitae

Kamel Al-Khaled

Department of Mathematics and Statistics, Faculty of Science,
Jordan University of Science and Technology, Irbid, 22110, JORDAN
E-mail: kamel@just.edu.jo, Mobile: 00962-795010519

• Personal Data

- Rank : Professor of Mathematics. Vice Dean Faculty of Science and Arts at JUST
- Date of Birth: March 9, 1964.
- Nationality : Jordanian.
- Marital Status : Married, five children (Aseel, Mustafa, Halla, Moh'd, Danyia).

• Academic History

- Ph.D. in Mathematics Stat., Mathematical Modeling (Applied Differential Equations) University of Nebraska-Lincoln, Lincoln-Nebraska, USA, August 1996. Title of Dissertation: Theory and Computation in Hyperbolic Model Problems. Advisor: Professor Thomas Shores.
- M.Sc. in Mathematics, University of Nebraska-Lincoln, USA, December 1993.
- M.Sc. in Mathematics, Yarmouk University, Irbid, Jordan. June 1988. Title of Thesis: Lagrange Interpolation of an Entire Function. Advisor: Professor Radwan Al-Jarrah
- B.Sc. in Mathematics, Yarmouk University, Irbid, Jordan. June 1986.

• Experience:

- Full Professor: Jordan University of Science and Technology since September 2009. Associate Professor, Sept. 2001 till Sept. 2009. Assistant Professor: Sept. 1996 to Sept. 2001.
- Chairman Department of Mathematics and Statistics, Sept. 2008 till Sept. 2009,
- Vice Dean Faculty of Science and Arts, Sept. 2009 till Sept. 2013, and Sept. 2022 till now.
- Sabbatical Leave (and Leave without Pay) at United Arab Emirates University, Sept. 2002 till Sept. 2006.
- Sabbatical Leave (and Leave without Pay) at Sultan Qaboos University(Oman), Sept. 2013 till Sept. 2016.
- Visiting Professor: Department of Mathematics and Statistics, University of Nebraska-Lincoln (USA), June 27, 1999-Sept. 2, 1999.
- Teaching assistant at the Mathematics Department, University of Nebraska-Lincoln (U.S.A), June 20, 1994 - August 12, 1996.

• Academic Honors and Scholarships:

1. Abdul Hammeed Shoman Prize for young Arab Scientist (2000).
2. National Research Award 2020 for the Energy and Industry Sector-PhD holders category- by the Ministry of Higher Education, Research and Innovation, Oman.
3. A scholarship from Jordan University of Science and Technology to obtain a Ph.D in Mathematics from the University of Nebraska-Lincoln, USA.
4. Teaching assistant from the University of Nebraska-Lincoln Aug. 1993- July, 1996.

- **IT Experience** Since 1992, I have been active in integrating technology in the teaching and learning of Mathematics. I have good knowledge in: Mathematica, Latex, Maple. Also, I have repeatedly used Mathematica to setup programs for solving differential equations.
- **Members of committees**
 1. **University committees**
 - (a) Research and Graduate Studies Committee.
 - (b) Accreditation committees. Review of all applications for accreditation at Faculty of Science.
 2. **College committees**
 - (a) Research and Graduate Studies Committee(Chairman).
 - (b) Science Day (Chairman).
 - (c) Promotions Committee.
 3. **Department committees:** Member of many committees at Department of Mathematics.
- **Courses Taught**
 - **Jordan University of Science and Technology** Methods of Applied Mathematics(Graduate), Research in Applied Mathematics, Topics in Applied Mathematics (Difference Equations), Numerical Analysis I and II, Mathematical Methods I and II ,Discrete Mathematics, Mathematical Modeling, Complex Analysis, Real Analysis I, Partial Differential Equations, Advanced Calculus, Linear Algebra I and II, Ordinary Differential Equations, Intermediate Analysis, Calculus I and II.
 - **United Arab Emirates University** Research Project, Mathematical Modeling, Numerical Analysis 1, Ordinary Differential Equation, Foundation of Geometry, Set Theory and Logic, Number Theory, Math. and Eng. Appl. III, Partial Differential Equations.
 - **Sultan Qaboos University(Oman)** Research Project, Mathematical Modeling, Numerical Analysis 1, Linear Programming.
 - **The University of Nebraska-Lincoln (USA)** Matrix Theory, Discrete Math. (Undergraduate/Graduate) [summer 1999], College algebra (Undergraduate)[1994-1996].
- **Student evaluation of teaching** Student evaluation of teaching is an instrument for gathering data from students about their response to teaching. The purpose of student evaluation of teaching is to provide staff with valid and reliable information with which to make informed decisions about improving student learning outcomes. My student evaluation in average is 85.
- **Review and Editorial Work**
 1. Member of the Jordanian Mathematical Society.
 2. Member of the Society of friends of scientific research at public universities in Jordan (Jan. 2001).
 3. Member of the American Mathematical Society (1993-2000).
 4. A referee for
 - Journal of Computational and Applied Mathematics. International Journal of Computer Mathematics. J. of Computers and Mathematics with Applications. Applied Numerical Mathematics. Journal of Applied Mathematics and Computing. Applied Mathematics and Computation. Communications in Nonlinear Science and Numerical Simulations, and other local journals.
 5. A referee for many promotions.
 6. External Examiner for PhD dissertations: Jordan, Oman, India, Syria.
- **Accreditation**
 1. participated to present the program files for some departments-Faculty of Engineering for accreditation purposes by ABET in 2008-2009 as a Math. Chair at JUST.
 2. Being Vice Dean Faculty of Science at JUST 2009 till 2013.

3. During my visit to Oman, 2013 till 2016.
 4. Assigned by minister of Higher Edu. in Jordan to reviewed accreditations for two private universities.
- **Research Interests** My general research interests are in the areas of applied mathematical modeling, Approximation theory, Operation Research, and the differential equations of applied mathematics. More specifically, my current research interests include these topics:
 - Ordinary and partial differential equations that arise from modeling in applied mathematics (Soliton Waves, Conservation laws).
 - Sinc methods (some kind of wavelets), as applied to numerical solutions to differential equations.
 - Adomian decomposition method as applied to numerical solutions to partial differential equations.
 - Approximation Theory. Particularly Hermite interpolation. Chebyshev series.
 - My Erdos Number is 4.
 - My h Index is: 35(Google Scolar), and 29(Scopus) .

- **Publications:** The mathematical research that I am currently engaged in is in the field of ” Approximate and numerical solutions for ordinary and partial differential equations”. All of the mathematical research that I have managed to conduct during my academic career, 1996- present, has been published in a refereed, indexed journals. My research has also been cited by other researchers. Some of the journals I have published in are

1. Applied Mathematics and Computations.(USA, Impact Factor: 1.65)
2. J. of Computational and Applied Mathematics.(Netherland, Impact Factor: 1.26)
3. Computers and Mathematics with Applications.(UK, Impact Factor: 1.697)
4. Applicable Analysis.(UK, Impact Factor 0.803)
5. Applied Mathematical Modeling.(USA, Impact Factor 2.251)
6. Chaos, Solitons and Fractals.(UK, Impact factor 1.448)
7. Numerical Functional Analysis and Applications.(USA, Impact Factor 0.54)
8. International Journal of Mathematics and Mathematical Sciences.(USA)
9. Journal of Applied Mathematics and Computing(JAMC).(Germany)
10. Physics Letters A.(Netherland, Impact Factor 1.683)
11. Physica A.(USA, Impact Factor 1.732)
12. Phys. Scr.(USA, Impcat factor 1.126)
13. International Journal of Computer Mathematics, 0.825
14. Mathematics and Computers in Simulation.(Netherland, Impact Factor 0.949)
15. Journal of Mathematical Analysis and Applications.(USA, Impact factor 1.120)
16. Mathematical BioSciences.(Netherland, 1.303)
17. Biosystems (Netherland, 1.548)
18. International Journal of Bifurcation and Chaos, 1.078

Here are some of the **selected publications**

1. Al-Jarrah, Radwan; **Kamel Al-Khaled**. Lagrange interpolation and entire functions. Rev. Colombiana Mat. 24 (1990), no. 3-4, 115–123.
2. **Kamel Al-Khaled**. A Sinc-Galerkin approach on the p -system. Saitama Math. J. 16 (1998), 1–13 (1999).
3. **Kamel Al-Khaled**. Cardinal-type approximations of Riemann solutions in balance laws. Saitama Math. J. 17 (1999), 95–104 (2000).

4. **Kamel Al-Khaled**. Hermite Interpolation Based on Chebyshev Nodes, *Math. Sci. Res. HOT-LINE* 4(7), p.1-9 (2000).
5. **Kamel Al-Khaled**. SINGULAR PERTURBATION TECHNIQUES FOR THE SOLUTE TRANSPORT EQUATION IN UNSATURATED POROUS MEDIA, *Proceedings of ALGORITMY 2000, Conference on Scientific Computing*, pages 309-313
6. **Kamel Al-Khaled**; Khalil, Roshdi. Some norms estimates of Hermite type interpolation operators. *Numer. Funct. Anal. Optim.* 21 (2000), no. 5-6, 579–588.
7. **Kamel Al-Khaled**. On the existence of solutions for a class of first order differential equations, *interna. J. of Math. And Math. Sci.* Vol. 25, No. 1, pp. 1-10. (2001).
8. **Kamel Al-Khaled**. Numerical study of fisher's reaction-diffusion equation by the Sinc collocation method, *J. Comp. Applied Math.* Vol. 137 (2), pp. 245-255(2001).
9. **Kamel Al-Khaled**. Sinc Numerical Solution for Solitons and Solitary Waves, *J. Comp. Applied Math.* Vol. 130, No. 1-2, pp. 283-292 (2001).
10. **Kamel Al-Khaled**. Numerical solutions of singular two-point boundary value problems via the Sinc method", *Libertas Math.* 21 (2001), pp. 75–82.
11. **Kamel Al-Khaled**. An approximate solution for a class of nonlinear Hill's equations. *applicable analysis*, Vol. 79, pp. 321-334 (2001).
12. **Kamel Al-Khaled**. On the rate convergence of the Chebyshev series to functions of bounded variation, *Missouri J. Math. Sci.* 14 (2002), no. 1, 4–10.
13. M. S. Sababhah, A. Nasayr, **Kamel Al-Khaled**. Some Convergence Results on Sinc Interpolation, *J. Ineq Pure and Appl. Math.*, 4(2), Art. 32 (2003).
14. M. A. Noor, K. I. Noor, **Kamel Al-Khaled**. Predictor-Corrector Methods for General Mixed Quasi Variational Inequalities, *Applied Mathematics and Computation*, Volume 157, Issue 3, 15 October 2004, Pages 643-652.
15. Eisa A. Al-said, M. A. Noor, Dogan Kaya, **Kamel Al-Khaled**, Finite Difference Method for Solving Fourth Order Obstacle Problems. *International Journal of Computer Mathematics*. Volume 81, Number 6, June 2004, pp. 741 - 748.
16. **Kamel Al-Khaled**, Fathi Allan. Construction of Solutions for the Shallow Water equations by the Decomposition Method. *Mathematics and Computers in Simulation*, Volume 66, Issue 6, 12 August 2004, Pages 479-486.
17. **Kamel Al-Khaled**, Dogan Kaya, M. A. Noor. Numerical Comparison of Methods for solving parabolic Problems. *J. Appl. Math. Comp.* Volume/Issue 157/3 pp. 735-743(2004).
18. **Kamel Al-Khaled**. Numerical approximations for population growth models. *Applied Mathematics and Computation*, Volume 160, Issue 3, 27 January 2005, Pages 865-873.
19. Shaher Momani; **Kamel Al-Khaled**. Numerical solutions for systems of fractional differential equations by the decomposition method. *Applied Mathematics and Computation*, Volume 162, Issue 3, 25 March 2005, Pages 1351-1365.
20. **Kamel Al-Khaled**, Shaher Momani. An approximate Solution for a Fractional Diffusion-Equation using the Decomposition Method. *Applied Math. and Computation*, Vol. 165/2 pp 473-483(2005).
21. **Kamel Al-Khaled**, Shaher Momani, Ahmed Alawneh. Approximate wave solutions for generalized Benjamin Bona Mahony Burgers equations, *Applied Mathematics and Computation*, Volume 171, Issue 1, 1 December 2005, Pages 281-292.
22. **Al-Khaled, Kamel**; Allan, Fathi. Decomposition method for solving nonlinear integro-differential equations. *J. Appl. Math. Comput.* 19 (2005), no. 1-2, 415–425.
23. **Kamel Al-Khaled**. Numerical Solutions of The Laplace's Equation. *Applied Math. Computation*, Volume 170, Issue 2, 15 November 2005, Pages 1271-1283.
24. Fathi Allan, **Kamel Al-Khaled** . On the analytic solution of fully developed shock wave equation, *Computational Applied Mathematics*, Volume 192, Issue 2 , 1 August 2006, Pages 301-309.

25. **Kamel Al-Khaled**, M. Naim Anwar. Numerical comparison of methods for solving second-order ordinary initial value problems. *Applied Math. Modeling*, Volume 31, Issue 2, February 2007, Pages 292-301.
26. **Kamel Al-Khaled**. Theory and Computation in Singular Boundary Value Problems. *Chaos Soliton and fractals*, Vol. 33, Issue 2, July 2007, pp. 678-684.
27. M. A. Hajji, **Kamel Al-Khaled**. Two reliable methods for solving nonlinear evolution equations. *Applied Mathematics and Computation*, Volume 186, Issue 2, 15 March 2007, Pages 1151-1162.
28. U. Al-Khawaja; **Kamel Al-Khaled**. Error control in Adomian's decomposition method applied to the time-dependent Gross-Pitaevskii equation. *International J. of Computer Math.* Vol. 83, Issue 2, Jan. 2007, pp.1-7.
29. Dogan Kaya, **Kamel Al-Khaled**. A Numerical Comparison of a Kawahara Equation. *Physics Letters A*, Vol. 563, Issues 5-6, 9 April 2007, pp. 433-439.
30. M. A. Hajji; **Kamel Al-Khaled**. Analytic studies and numerical simulations of the generalized Boussinesq equation. *Applied Mathematics and Computation*, Volume 191, Issue 2, 15 August 2007, Pages 320-333
31. M. A. Hajji; **Kamel Al-Khaled**. Numerical methods for nonlinear fourth-order boundary value problems with applications. *International J. Computer Mathematics*, Vol. 85, No.1, January 2008, Pages 83-104.
32. **Kamel Al-Khaled**, Ameina S. Nusier, Numerical Investigation for Solitary Solutions of the Boussinesq Equation, *Applied Mathematics E-Notes*, 8 (2008), Pages 1-12.
33. **Kamel Al-Khaled**, Mohammed Al-Refai, Ameen Alawneh, Traveling wave solutions using He's variational method and the tanh method for nonlinear coupled equations, *Applied Mathematics and Computation*, Volume 202, Issue 1, 1 August 2008, Pages 233-242.
34. **Kamel Al-Khaled**, M. A. Hajji. On the existence of solutions for strongly nonlinear differential equations, *Journal of Mathematical Analysis and Applications*, Volume 344, Issue 2, 15 August 2008, Pages 1165-1175
35. Ameen Alawneh, **Kamel Al-Khaled**, Mohammed Al-Towaiq, Reliable algorithms for solving integro-differential equations with applications, *International J. Computer Mathematics*, Vol. 87, No. 7, June 2010, pp. 1538-1554.
36. Ameen Alawneh, **Kamel Al-Khaled**, Numerical treatment of stochastic models used in statistical systems and financial markets, *Computers & Mathematics with Applications*, Volume 56, Issue 10, November 2008, Pages 2724-2732.
37. Sami Shukri, **Kamel Al-Khaled**, The Extended Tanh Method For Solving Systems Of Nonlinear Wave Equations. *Applied Mathematics and Computation*, Volume 217, Issue 5, 1 November 2010, Pages 1997-2006 .
38. Marwan Alquran, **Kamel Al-Khaled**, Computation of eigenvalues and solutions for Sturm-Liouville problems using Sinc-Galerkin and differential transform methods, *Applications and Applied Mathematics: An International Journal (AAM)*, Vol. 5, No. 1 (June 2010) pp. 128 - 147.
39. Imad A. Az-Zo'bi, **Kamel Al-Khaled**, A new convergence proof of the Adomian decomposition method for a mixed hyperbolic elliptic system of conservation laws. *Applied Mathematics and Computation*, Volume 217, Issue 8, 15 December 2010, Pages 4248-4256.
40. Marwan Alquran, **Kamel Al-Khaled**, Ameen Alawneh, Simulated Results for Deterministic Model of HIV Dynamics, *Stud. Univ. Babeş-Bolyai Math.* Volume LVI, Number 1 March 2011, pp. 165-178.
41. Marwan Alquran, **Kamel Al-Khaled**, Approximate Solutions to Nonlinear Partial Integro-differential Equations with Applications in Heat Flow, *Jordan Journal of Mathematics and Statistics (JJMS)* 3(2), 2010, pp. 92 - 115.
42. Marwan Alquran, **Kamel Al-Khaled**, Numerical Comparison of Methods for Solving Systems of Conservation Laws of Mixed Type, *International Journal of Mathematical Analysis*, Vol. 5, no. 1, 2011, pages 35-47.

43. **Kamel Al-Khaled**, Ameen Alawneh and Nadia Al-Rashaideh, Improving Newtons Method for Non-linear Optimization Problems in Several Variables, Proceedings of the 11th International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2011 2630 June 2011.
44. Marwan Alquran, **Kamel Al-Khaled**, Sinc and Solitary Wave Solutions to the Generalized Benjamin-Bona-Mahony-Burgers Equations, Phys. Scr. 83 (2011) (6pp).
45. Marwan Alquran, **Kamel Al-Khaled**, The tanh and sinecosine methods for higher order equations of Kortewegde Vries type. Phys. Scr. 84 (2011) 025010 (4pp)
46. Marwan Alquran, **Kamel Al-Khaled**, Mohammed Ali and Ameina Ta'any, The combined Laplace transform-differential transform method for solving linear non-homogeneous PDEs, Journal of Mathematical and Computational Science 2 (3), 690-701.
47. Marwan Alquran, **Kamel Al-Khaled** and Hassan Ananbeh, New Soliton Solutions for Systems of Nonlinear Evolution Equations by the Rational Sine-Cosine Method, Studies in Mathematical Sciences 3 (1), 1-9.
48. Marwan Alquran, Mohammed Ali and **Kamel Al-Khaled**, Solitary wave solutions to shallow water waves arising in fluid dynamics. Nonlinear Studies, Vol. 19, No. 4, pp. 555-562, 2012
49. Marwan Alquran, **Kamel Al-Khaled**, Mathematical methods for a reliable treatment of the (2+1)-dimensional Zoomeron equation, Mathematical Sciences 2012, 6:11.
50. Marwan Alquran, **Kamel Al-Khaled**, Effective Numerical Methods for Strongly Nonlinear Differential Equations with Oscillations, Mathematical Sciences 2012, 6:32
51. **Kamel Al-Khaled** and Mohamed Al-Safeen, Homotopy Perturbation Method For Fractional Shallow Water Equations, SQU Journal for Sciences, 2014, 19 (1), pp. 74-86.
52. **Kamel Al-Khaled**, Existence of solutions to nonlinear advection-diffusion equation applied to Burgers' equation using sinc methods, Applications of mathematics, Vol. 59, No. 4, pp. 441-452, 2014.(Sci. Citation Expanded)
53. **Kamel Al-Khaled**, Cardinal-Type Approximations for Conservation Laws of Mixed Type, Nonlinear Studies, Vol. 21, No. 3, pp. 423-433, 2014.(Scopus)
54. S. Rana; S. Samanta; S. Bhattacharya; **Kamel Al-Khaled**; A. Goswami; Joydev Chattopadhyay, The effect of nano particles on plankton dynamics: A mathematical model, Biosystems, Volume 127, January 2015, Pages 28-41. (Elsevier, Sci. citation Index)
55. **Kamel Al-Khaled**, Sinc-Legendre Collocation Method for the Non-Linear Burgers' Fractional Equation, Annals of the University of Craiova - Mathematics and Computer Science Series, Volume 41(2), 2014, Pages 234-250. (Scopus)
56. **Kamel Al-Khaled**, Marwan Alquran, An Approximate Solution for a Fractional Model of Generalized Harry Dym Equation. Accepted,(Dec. 29, 2014) *Mathematical Sciences, Springer*
57. Tridip Sardar, Sourav Rana, Sabyasachi Bhattacharya, **Kamel Al-Khaled**, Joydev Chattopadhyay, A generic model for a single strain mosquito-transmitted disease with memory on the host and the vector, Mathematical BioSciences, Volume 263, May 2015, Pages 18-36. *Elsevier, Sci. Citation Index*
58. **Kamel Al-Khaled**, Numerical solution of time-fractional partial differential equations using Sumudu decomposition method, Rom. J. of Phy., Vol.60, Issue 1-2, Pages 99-110, 2015(Sci. Citation Expanded)
59. Marwan Alquran, **Kamel Al-Khaled**, Joydev Chattopadhyay, Analytical Solutions of Fractional Population Diffusion Model: Residual Power Series, Nonlinear Studies, Vol. 22, No. 1(2015), Pages 31-39.
60. S. K. Sasmal, A. R. Bhowmick, **Kamel Al-Khaled**, S. Bhattacharya, Joydev Chattopadhyay, Interplay of Functional Responses and Weak Allee Effect on Pest Control via Viral Infection or Natural Predator: An Eco-epidemiological Study, Accepted in Differential Equations and Dynamical Systems. Feb. 26, 2015. (Springer)
61. **Kamel Al-Khaled**, Numerical wave solutions for nonlinear coupled equations using Sinc-collocation method, SQU Journal for Science, 2015, 20(2),19-30.

62. Nikhil Pal, Sudip Samanta, Santanu Biswas, Marwan Alquran, **Kamel Al-Khaled**, Joydev Chattopadhyay, Stability and Bifurcation analysis of a three species food chain model with delay, *International Journal of Bifurcation and Chaos*, August 2015, Vol. 25, No. 09, Pages(21).
63. Marwan Alquran, **Kamel Al-Khaled**, Tridip Sardar, Joydev Chattopadhyay, Revisited Fisher's Equation in a new outlook: A fractional derivative approach, *Physica A: Statistical Mechanics and its Applications* 438(2015), pages 81-93.
64. **Kamel Al-Khaled**, Marwan Alquran, Amal Al-Saidi, Gaston M. NGuerekata, Joydev Chattopadhyay, Numerical Methods for Solving Nonlinear Fractional Integro-Differential Equations, *Nonlinear Studies*. Vol. 22, No. 4 (2015), Pages 647-657. (Scopus).
65. Serein Al-Ratrout and **Kamel Al-Khaled** An effective Java-based Algorithm to Compute Eigenvalues of Symmetric Toeplitz Matrices, *British Journal of Applied Science and Technology*, DOI: 10.9734/BJAST/(2016)/21872
66. H.M Jaradat, Safwan Al-Shar'a, Qamar Khan Marwan Alquran, **Kamel Al-Khaled**, "Analytical Solution of Time-Fractional Drinfeld-Sokolov-Wilson System Using Residual Power Series Method," *IAENG International Journal of Applied Mathematics*, vol. 46, no. 1, pp64-70, (2016) (Scopus)
67. **Kamel Al-Khaled**, M. A. Hajji, Mathematical Modeling to simulate Contaminant Movement and Water Flow for Groundwater, *Journal of applied analysis and computation*, Volume 6, Number 1, February (2016), 156-170.(Sci. Citation Index Expanded)
68. **Kamel Al-Khaled**, Marwan Alquran, Convergence and norm estimates of Hermite interpolation at zeros of Chebyshev polynomials, *SpringerPlus*, Nov. (2016) 5:1992, Pages 1-14.
69. Marwan Alquran, **Kamel Al-Khaled**, Seenith Sivasundaram, H.M Jaradat, Mathematical and numerical study of existence of bifurcations of the generalized fractional Burgers-Huxley equation, *Nonlinear Studies*, Vol.24(2017),No.1,pp.235-244.
70. Marwan Alquran, **Kamel Al-Khaled**, M. Ali, Omar Arqub, Bifurcations of the time-fractional generalized coupled Hirota-Satsuma KdV system *Waves, Wavelets and Fractals* 3 (1)(2017), 31-39.
71. Muna Al-Ghabshi, E.V. Krishnan, **Kamel Al-Khaled**, Marwan Alquran, Exact and Approximate Solutions of a System of Partial Differential Equations, *International Journal of Nonlinear Science* 23 (1)(2017), 11-21
72. F. Ababneh, Marwan Alquran, **Kamel Al-Khaled**, J Chattopadhyay, A New and Elegant Approach for Solving 2×2 -Order Linear Fractional Differential Equations. *Mediterranean journal of mathematics* 14 (2)(2017), 1-18.
73. **Kamel Al-Khaled**; Nicholas Haynes; William Schiesser; Muhammad Usman; A numerical study of eventual periodicity of the Korteweg-de Vries type equation using sinc collocation method, *Journal of Computational and Applied Mathematics*, 330 (2018) 417-428.
74. **Kamel Al-Khaled** Finite Fourier transform for solving potential and steady-state temperature problems. *Advances in Difference Equations* 2018 (1), 98.
75. Imad Jaradat, Marwan Alquran, **Kamel Al-Khaled** An analytical study of physical models with inherited temporal and spatial memory, *European J. Phys. Plus* 133:162 (2018).
76. **Kamel Al-Khaled**, Existence and approximation of solutions for systems of first order differential equations, *Nonlinear Dynamics and Systems Theory*, 18(4) (2018) 319-330.
77. **Kamel Al-Khaled**, Sinc-Galerkin Method for Solving Nonlinear Fractional Fourth-Order Boundary Value Problems, In *Proceedings of International Conference on Fractional Differentiation and its Applications (ICFDA)*, July 2018.
78. **Kamel Al-Khaled**, Wavelet-Based Numerical Scheme Compared with VIM for Solving Kawahara Equation, In *Proceedings of the Twentieth International Conference on Geometry, Integrability and Quantization*, pp. 79-87. Institute of Biophysics and Biomedical Engineering, Bulgarian Academy of Sciences, 2019.
79. Alalouch, Chaham, Saleh Al-Saadi, Husam AlWaer, and **Kamel Al-Khaled**, Energy saving potential for residential buildings in hot climates: The case of Oman, *Sustainable Cities and Society* 46 (2019): 101442.

80. Az-Zo'bi, Emad A., **Kamel Al-Khaled** and Amer Darweesh, Numeric-analytic solutions for non-linear oscillators via the modified multi-stage decomposition method, *Mathematics* 7, no. 6 (2019): 550.
81. **Kamel Al-Khaled**, Amer Darweesh, and Maha H. Yousef, Convergence of numerical schemes for the solution of partial integro-differential equations used in heat transfer, *Journal of Applied Mathematics and Computing* 61.1-2 (2019): 657-675.
82. **Kamel Al-Khaled** and Issam Abu-Irwaq, Computational Sinc-scheme for extracting analytical solution for the model Kuramoto-Sivashinsky equation, *International Journal of Electrical and Computer Engineering* (2088-8708) 9 (2019).
83. **Kamel Al-Khaled**, Sami Ullah Khan and Ilyas Khan, Chemically reactive bioconvection flow of tangent hyperbolic nanoliquid with gyrotactic microorganisms and nonlinear thermal radiation, *Heliyon* 6.1 (2020): e03117.
84. **Kamel Al-Khaled**, Sinc collocation linked with finite differences for Korteweg-de Vries Fractional Equation, *International Journal of Electrical and Computer Engineering* (2088-8708) 10 (2020).
85. Zahra Abdelmalek, Sami Ullah Khan, Hassan Waqas, **Kamel Al-Khaled**, Iskander Tlili, A proposed unsteady bioconvection model for transient thin film flow of rate-type nanoparticles configured by rotating disk, *Journal of Thermal Analysis and Calorimetry*, volume 144, pages16391654 (2021)
86. **Kamel Al-Khaled**, Neda' M. Rababah, Fast Convergence Methods for Hyperbolic Systems of Balance Laws with Riemann Conditions, *Symmetry* 12 (5), 757, 2020.
87. **Kamel Al-Khaled**, Ashwaq Hazaimah, Comparison Methods for Solving Non-Linear SturmLiouville Eigenvalues Problems. *Symmetry* 12 (7), 1179, 2020.
88. Zahra Abdelmalek, **Kamel Al-Khaled**, Hassan Waqas, A Aldabesh, Sami Ullah Khan, Saed A Musmar, Iskander Tlili, Bioconvection in Cross Nano-Materials with Magnetic Dipole Impacted by Activation Energy, Thermal Radiation, and Second Order Slip, *Symmetry* 12 (6), 1019, 2020.
89. Suayip Yzbasi, **Kamel Al-Khaled**, Nurcan Baykus Savaseneril, Devendra Kumar, Introduction to the Special Issue on Numerical Methods for Differential and Integral Equations, *Computer Modeling in Engineering and Sciences*, 123 (3), 913-915, 2020.
90. Raheel Ahmed, Nasir Ali, **Kamel Al-Khaled**, Sami Ullah Khan, Iskander Tlili, Finite difference simulations for non-isothermal hydromagnetic peristaltic flow of a bio-fluid in a curved channel: Applications to physiological systems, *Computer Methods and Programs in Biomedicine*, 105672, 2020.
91. **Kamel Al-Khaled**, Sami Ullah Khan, Thermal Aspects of Casson Nanoliquid with Gyrotactic Microorganisms, Temperature-Dependent Viscosity, and Variable Thermal Conductivity: Bio-Technology and Thermal Applications, *Inventions*, 5 (3), 39, 2020.
92. Muhammad Sadiq Hashmi, **Kamel Al-Khaled**, Nargis Khan, Sami Ullah Khan, Iskander Tlili, Buoyancy driven mixed convection flow of magnetized Maxwell fluid with homogeneous-heterogeneous reactions with convective boundary conditions, *Results in Physics*, 2020.
93. Sami Ullah Khan, **Kamel Al-Khaled**, M. I. JazKhan, Convective nonlinear thermally developed flow of thixotropic nanoliquid configured by Riga surface with gyrotactic microorganism and activation energy: A bio-technology and thermal extrusion model, *International Communications in Heat and Mass Transfer*, Volume 119, December 2020, 104966.
94. **Kamel Al-Khaled**, Maha, Yosef, An analytic study of the fractional order model of HIV-1 virus and CD4+ T-cells using Adomian method. *International Journal of Electrical and Computer Engineering*. 2021, 11(2), pp. 14601468.
95. Muhammad Mubashir Bhatti, **Kamel Al-Khaled**, Sami Ullah Khan, Wathek Chamman, Muhammad Awais, Darcy-Forchheimer higher-order slip flow of Eyring-Powell nanofluid with nonlinear thermal radiation and bioconvection phenomenon, *Journal of Dispersion Science and Technology*, 2021.
96. Nargis Khan, **Kamel Al-Khaled**, Anum Khan, Muhammad Sadiq Hashmi, Sami Ullah Khan, M.I. Jaz Khan, Sumaira Qayyum, Aspects of constructive/destructive chemical reactions for viscous fluid flow between deformable wall channel with absorption and generation features. *International Communications in Heat and Mass Transfer*, 120 (2021).

97. Yu-Ming Chu, Nargis Khan, M. Ijaz Khan, **Kamel Al-Khaled**, Nasreen Abbas, Sami Ullah Khan, Muhammad Sadiq Hashmi, Sumaira Qayyum, S. Kadry, Thermophoresis particle deposition analysis for nonlinear thermally developed flow of Magneto-Walter's B nanofluid with buoyancy forces. *Alexandria Engineering Journal*, Volume 60, Issue 1, February 2021, Pages 1851-1860.
98. Hu Ge-JiLe, Bilal Ahmed, **Kamel Al-Khaled**, Muhammad Tanseer ul Mehdi, Sami Ullah Khan, M Ijaz Khan, Yu-Ming Chu ssPeristaltic activity in an asymmetric inclined channel with inertial forces under the inducement of magnetic field: Finite Element Method, *Alexandria Engineering Journal*, Volume 60, Issue 5, October 2021, Pages 4723-4734.
99. Mohsan Hassan, **Kamel Al-Khaled**, Sami Ullah Khan, Iskander Tlili, Wathek Chammam, Assessment of boundary layer for flow of non-Newtonian material induced by a moving belt with power law viscosity and thermal conductivity models. *Numerical Methods for Partial Differential Equations*, 2021.
100. Sami Ullah Khan, **Kamel Al-Khaled**, A Aldabesh, Muhammad Awais, Iskander Tlili, Bioconvection flow in accelerated couple stress nanoparticles with activation energy: bio-fuel application, *Scientific Reports*, Vol. 11, Issue 1, (2021), Pages 1-15.
101. M. M. Bhatti, **Kamel Al-Khaled**, Sami Ullah Khan, Bioconvection analysis for flow of Oldroyd-B nanofluid configured by a convectively heated surface with partial slip effects, *Surfaces and Interfaces*, Volume 23, April (2021), 100982.
102. Fahad S Al-Mubaddel, Umar Farooq, **Kamel Al-Khaled**, Sajjad Hussain, Sami Ullah Khan, Muhammed O Aijaz, Mohammad Rahimi-Gorji, Hassan Waqas, Double stratified analysis for bioconvection radiative flow of Sisko nanofluid with generalized heat/mass fluxes, *Physica Scripta* 96 055004 (2021).
103. Yun-Xiang Li, Hassan Waqas, **Kamel Al-Khaled**, Shan Ali Khan, M Ijaz Khan, Sami Ullah Khan, Rabia Naseem, Yu-Ming Chu, Simultaneous features of Wu's slip, nonlinear thermal radiation and activation energy in unsteady bio-convective flow of Maxwell nanofluid configured by a stretching cylinder, *Chinese Journal of Physics*, Volume 73, October 2021, Pages 462-478.
104. **Kamel Al-Khaled**, M Ijaz Khan, Sami Ullah Khan, MY Malik, Sumaira Qayyum, Non-uniform heat source/sink applications for the radiative flow of Brinkman micropolar nanofluid with microorganisms, *Computational and Theoretical Chemistry*, Volume 1203, September 2021, 113330.
105. Yun-Jie Xu, Sami Ullah Khan, **Kamel Al-Khaled**, M Ijaz Khan, Faris Alzahrani, M Imran Khan, Effectiveness of induced magnetic force and non-uniform heat source/sink features for enhancing the thermal efficiency of third grade nanofluid containing microorganisms, *Case Studies in Thermal Engineering*, Volume 27, October 2021, 101305.
106. Ying-Qing Song, Ali Raza, **Kamel Al-Khaled**, Saadia Farid, M Ijaz Khan, Sami Ullah Khan, Qiu-Hong Shi, MY Malik, M Imran Khan, Significances of exponential heating and Darcy's law for second grade fluid flow over oscillating plate by using Atangana-Baleanu fractional derivatives, *Case Studies in Thermal Engineering*, Volume 27, October 2021, 101266.
107. Bing Guo, Ali Raza, **Kamel Al-Khaled**, Sami Ullah Khan, Saadia Farid, Ye Wang, M Ijaz Khan, MY Malik, S Saleem, Fractional-order simulations for heat and mass transfer analysis confined by elliptic inclined plate with slip effects: A comparative fractional analysis, *Case Studies in Thermal Engineering*, Volume 28, December 2021, 101359.
108. Yun-Xiang Li, Hassan Waqas, **Kamel Al-Khaled**, Sajjad Hussain, Sami Ullah Khan, Tian-Chuan Sun, M Ijaz Khan, MY Malik, Iskander Tlili, Study of radiative Reiner-Philippoff nanofluid model with gyrotactic microorganisms and activation energy: A Cattaneo-Christov Double Diffusion (CCDD) model analysis, *Chinese Journal of Physics*, Volume 73, October 2021, Pages 569-580.
109. Yi-Xia Li, **Kamel Al-Khaled**, Sami Ullah Khan, Tian-Chuan Sun, M Ijaz Khan, MY Malik, Bioconvective Darcy-Forchheimer periodically accelerated flow of non-Newtonian nanofluid with Cattaneo-Christov and Prandtl effective approach, *Case Studies in Thermal Engineering*, Volume 26, August 2021, 101069.
110. Zhao-Wei Tong, Bilal Ahmed, **Kamel Al-Khaled**, Sami Ullah Khan, M Ijaz Khan, Sohail Ahmad, MY Malik, Wei-Feng Xia, Peristaltic Blood Transport in Non-Newtonian Fluid Confined by Porous

- Soaked Tube: A Numerical Study Through Galerkin Finite Element Technique, *Arabian Journal for Science and Engineering* <https://doi.org/10.1007/s13369-021-05981-1> (2021).
111. Sami Ullah Khan, **Kamel Al-Khaled**, M.M. Bhatt Numerical experiment of Reiner-Philippoff nanofluid flow subject to the higher activation energy and bioconvection, *partial differential equations in applied mathematics*. Volume 4, December (2021), 100126.
 112. M. Ijaz Khan, **Kamel Al-Khaled**, Sami Ullah Khan, Taseer Muhammad, Hassan Waqas, Adel M. El-Refaey, M. Imran Khan, Dynamic consequences of nonlinear radiative heat flux and heat generation/absorption effects in cross-diffusion flow of generalized micropolar nanofluid, *Case studies in thermal engineering*, Volume 28, December 2021, 101451
 113. Raza, Ali; **Kamel Al-Khaled**; M. Ijaz Khan; Farid, Saadia; Sami Ullah Khan; Syed Irfan Shah; Ali, Rifaqat, Investigation of dynamics of SWCNTs and MWCNTs nano particles in blood flow using Atangana-Baleanu time fractional derivative with ramped temperature, *Part E: Journal of Process Mechanical Engineering* (2021).
 114. A. Abbasi, **Kamel Al-Khaled**, M. Ijaz Khan, Sami Ullah Khan, Adel M. El-Refaey, Waseh Farooq, Mohammed Jameel, Optimized analysis and enhanced thermal efficiency of modified hybrid nanofluid (Al_2O_3, CuO, Cu) with nonlinear thermal radiation and shape features. *Case studies in thermal engineering*, Volume 28, December 2021.
 115. AliRaz, **Kamel Al-Khaled**, M. Ijaz Khan, Sami Ullah Khan, Saadia Farid, Absar Ul Haq, Taseer Muhammad, Natural convection flow of radiative maxwell fluid with Newtonian heating and slip effects: Fractional derivatives simulations. *Case studies in thermal engineering*,
 116. Sami Ullah Khan, Usman Usman, **Kamel Al-Khaled**, Syed Modassir Hussain, Abuzar Ghaffari, M. Ijaz Khan, M. Waqas Ahmed, Implication of Arrhenius Activation Energy and Temperature-Dependent Viscosity on Non-Newtonian Nanomaterial Bio-Convective Flow with Partial Slip, *Arab J Sci Eng* (2021). <https://doi.org/10.1007/s13369-021-06274-3>.
 117. Khurram Javid, **Kamel Al-Khaled**, Mohsan Hassan, Salah Ud-Din Khan, Haleema, Ashfaq Ahmad, Shaikat Khan, A transport of Jeffrey model viscoelastic fluid by complex peristalsis motion of nonuniform curved channel's walls under resistance of magnetic field, *ZAMM Angew Math Mech*. 2021;e202100067. 28 October 2021 <https://doi.org/10.1002/zamm.202100067>.
 118. A.Abbasi, Sami Ullah Khan, **Kamel Al-Khaled**, M.Ijaz Khan, W.Farooq, Ahmed M.Galal, Khurram Javid, M.Y.Malik, Thermal prospective of Casson nano-materials in radiative binary reactive flow near oblique stagnation point flow with activation energy applications, *Chemical Physics Letters* Available online 28 October 2021, 139172.
 119. A. Abbasi, **Kamel Al-Khaled**, M. Ijaz Khan, Shahid Farooq, Waseh Farooq, Sami Ullah Khan, F. Mabood and Taseer Muhammad, Electro-Osmotic Flow of Prandtl Nanofluids with Thermal and Solutal Slip Flow Constraints: Keller Box Simulations. *Arab J Sci Eng* (2021). <https://doi.org/10.1007/s13369-021-06215-0>
 120. Faqir Shah, Sohail A. Khan, **Kamel Al-Khaled**, M. Ijaz Khan, Sami Ullah Khan, Nehad Ali Shah, Rifaqat Ali, Impact of entropy optimized Darcy-Forchheimer flow in $MnZnFe_2O_4$ and $NiZnFe_2O_4$ hybrid nanofluid towards a curved surface, *Z Angew Math Mech*. 2021;e202100194. <https://doi.org/10.1002/zamm.202100194>
 121. Khurram Javid, Mazhar Ellahi, **Kamel Al-Khaled**, Mohsin Raza, Sami Ullah Khan, M Ijaz Khan, Essam Roshdy El-Zahar, Soumaya Gouadria, Muhammad Afzaal, M Imran Khan EMHD creeping rheology of nanofluid through a micro-channel via ciliated propulsion under porosity and thermal effects, *Case Studies in Thermal Engineering* Volume 30, February 2022, <https://doi.org/10.1016/j.csite.2021.101746>.
 122. Ying-Qing Song, Hassan Waqas, **Kamel Al-Khaled**, Umar Farooq, Soumaya Gouadria, M.Imran, Sami Ullah Khan, M. Ijaz Khan, Sumaira Qayyum, Qiu-HongShi, Aspects of thermal diffusivity and melting phenomenon in Carreau nanofluid flow confined by nonlinear stretching cylinder with convective Marangoni boundary constraints, *Mathematics and Computers in Simulation* Available online 11 January 2022. Volume 195, May 2022, Pages 138-150. <https://doi.org/10.1016/j.matcom.2022.01.001>

123. Muzamil Hussain, Shahzad Maqsood Khan, Kamel Al-Khaled, Mohamed Ayadi, Naseem Abbas, Wathek Chammam, Performance analysis of biodegradable materials for orthopedic applications, *Materials Today Communications*, online 19 January 2022, 103167 <https://doi.org/10.1016/j.mtcomm.2022.103167>
124. Zahid Hussain, Kamel Al-Khaled, Uzma Ashrif, A. Abbasi, Sami Ullah Khan, W Farooq, M. Ijaz Khan, Shahid Farooq, M.Y. Malik, A mathematical model for radiative peristaltic flow of Jeffrey fluid in curved channel with Joule heating and different walls: Shooting technique analysis, *Ain Shams Engineering Journal* 13 (2022) 101685.
125. Khurram Javid, Lioua Kolsi, **Kamel Al-Khaled**, Mohamed Omri, Sami Ullah Khan & A. Abbasi (2022): Biomimetic propulsion of viscoelastic nanoparticles in a curved pump with curvature and slip effects: blood control bio-medical applications, *Waves in Random and Complex Media* (2022), DOI: 10.1080/17455030.2022.2028934.
126. L Kolsi, A Raza, K Al-Khaled, K Ghachem, SU Khan, AU Haq, Thermal applications of copper oxide, silver and titanium dioxide nanoparticles via fractional derivative approach, *Waves in Random and Complex Media* 33 (3), 794-807 2023. doi.org/10.1080/17455030.2022.2038816
127. Yong-Min Li, **Kamel Al-Khaled**, Soumaya Gouadria, Essam Roshdy El-Zahar, Usman, Sami Ullah Khan, M. Ijaz Khan, M. Y. Malik, Numerical simulations for three-dimensional rotating porous disk flow of viscoelastic nanomaterial with activation energy, heat generation and Nield boundary conditions, *Waves in Random and Complex Media* (2022), DOI: 10.1080/17455030.2022.2028934.
128. Tasawar Abbas, **Kamel Al-Khaled**, Ahmed Haseeb Raza, Mohamed Ayadi, Wathek Chammam, Sami Ullah Khan, Inclined magnetized flow of radioactive nanoparticles with exponential heat source and slip effects: Keller box simulation, *Journal of Nanofluids* April, 2022.
129. Piyu Li, Raza, Ali; Essam Roshdy El-Zahar, **Kamel Al-Khaled**; Sami Ullah Khan, M. Ijaz Khan; M. Riaz Khan, Fuzhang Wang, Applications of fractional derivatives in MHD free-convective oscillating flow of a blood based CNTs nanofluid across a porous medium, *Part E: Journal of Process Mechanical Engineering* (2022).
130. Lioua Kolsi, Ali Raza, **Kamel Al-Khaled**, Kaouther Ghachem, Sami Ullah Khan and Absar Ul Haq (2022): Thermal applications of copper oxide, silver, and titanium dioxide nanoparticles via fractional derivative approach, *Waves in Random and Complex Media* (2022), DOI: 10.1080/17455030.2022.2038816
131. Jawad Raza, Kamel Al-Khaled, Sumera Dero, Liaquat Ali Lund, Sami Ullah Khan, M Ijaz Khan, Attia Boudjemline, Imran Ali Chaudhry, Mohamed Boujelbene, Yassine Bouazzi. Heat and mass transfer phenomenon for micropolar nanofluid with microrotation effects: Nonsimilarity simulations. *International Journal of Modern Physics B* 37 (19), 2350183 - (2023)
132. M Ijaz Khan, Kamel Al-Khaled, Ali Raza, Sami Ullah Khan, Jiyan Omar, Ahmed M Galal. Mathematical and numerical model for the malaria transmission: Euler method scheme for a malarial model, *International Journal of Modern Physics B*, Volume 37 Issue 16, Pages 2350158, (2023)
133. Oluwaseun Adeyeye, Sultan Alshehery, Kamel Al-Khaled, Sultan Alqahtani, Zurni Omar, Liaquat Ali Lund, Sami Ullah Khan. Thermal and concentration slip flow of casson nanofluid with suction phenomenon: A newly developed block scheme. *International Journal of Modern Physics B* 37 (16), 2350151 (2023)
134. Shuhe Sun, M Ijaz Khan, Kamel Al-Khaled, Ali Raza, Sherzod Shukhratovich Abdullaev, Sami Ullah Khan, Nissren Tamam, Sayed M Eldin. Prabhakar fractional approach for enhancement of heat transfer due to hybrid nanomaterial with sinusoidal heat conditions. *Case Studies in Thermal Engineering*, 103240 (2023).
135. Sumera Dero, TN Abdelhameed, Kamel Al-Khaled, Liaquat Ali Lund, Sami Ullah Khan, Iskander Tlili. Contribution of suction phenomenon and thermal slip effects for radiated hybrid nanoparticles ($Al_2O_3 - Cu/H_2O$) with stability framework, *International Journal of Modern Physics B* 37 (15), 2350147 (2023).

136. Samina Batool, Kamel Al-Khaled, Tasawar Abbas, Qazi Mahmood Ul Hassan, Khalid Ali Khan, Kaouther Ghachem, Sami Ullah Khan, Lioua Kolsi. Double diffusion Forchheimer flow of Carreau-Yasuda nanofluid with bioconvection and entropy generation: Thermal optimized analysis via non-Fourier model, *Case Studies in Thermal Engineering*, 103172 (2023).
137. Wafa F Alfwzan, Zakir Hussain, Kamel Al-Khaled, Arshad Riaz, Talaat Abdelhamid, Sami Ullah Khan, Khurram Javid, M El Sayed, Wathek Chammam. An optimized stability framework for three-dimensional Hartman flow via Chebyshev collocation simulations. *Results in Physics* 49, 106497 (2023).
138. Quynh Hoang Le, Qasim Ali, Kamel Al-Khaled, Muhammad Amir, Samia Riaz, Sami Ullah Khan, Zahra Abdelmalek, Iskander Tlili.
[HTML] from sciencedirect.com Study of hybrid nanofluid containing graphene oxide and molybdenum disulfide nanoparticles with engine oil base fluid: A non-singular fractional approach. *Ain Shams Engineering Journal*, 102317 (2023).
139. Marwan Alquran, Mohammed Ali, Kamel Al-Khaled, George Grossman. Simulations of fractional time-derivative against proportional time-delay for solving and investigating the generalized perturbed-KdV equation. *Nonlinear Engineering* 12 (1), 20220282 (2023).
140. Lioua Kolsi, A Abbasi, Kamel Al-Khaled, W Farooq, Kaouther Ghachem, M Gul, Sami Ullah Khan. Stagnation point flow of chemically reactive nanofluid due to the curved stretching surface with modified Fourier and Fick theories. *Waves in Random and Complex Media* 33 (3), 841-859 (2023).
141. Ali Raza, Thirupathi Thumma, Kamel Al-Khaled, Sami Ullah Khan, Kaouther Ghachem, Muapper Alhadri, Lioua Kolsi. Prabhakar fractional model for viscous transient fluid with heat and mass transfer and Newtonian heating applications. *Waves in Random and Complex Media* 33 (3), 808-824 (2023).
142. Lioua Kolsi, Ali Raza, Kamel Al-Khaled, Kaouther Ghachem, Sami Ullah Khan, Absar Ul Haq. Thermal applications of copper oxide, silver, and titanium dioxide nanoparticles via fractional derivative approach. *Waves in Random and Complex Media* 33 (3), 794-807 (2023).
143. Aamar Abbasi, Kamel Al-Khaled, Ferjeni Zouidi, Sami Ullah Khan, M Ijaz Khan, Omar T Bafakeeh, Weseh Farooq, Rajashekhar Choudhari. Blood-based electro-osmotic flow of non-Newtonian nanofluid (Carreau-Yasuda) in a tapered channel with entropy generation. *ZAMM-Journal of Applied Mathematics and Mechanics/Zeitschrift fr Angewandte Mathematik und Mechanik* (2023).
144. Mohsan Hassan, Kamel Al-Khaled, Sami Ullah Khan, Iskander Tlili, Wathek Chammam. Assessment of boundary layer for flow of non-Newtonian material induced by a moving belt with power law viscosity and thermal conductivity models. *Numerical Methods for Partial Differential Equations* 39 (3), 1827-1840 (2023).
145. Badreddine Ayadi, Kaouther Ghachem, Kamel Al-Khaled, Sami Ullah Khan, Karim Kriaa, Chemseddine Maatki, Nesrine Zahi, Lioua Kolsi. Three-Dimensional Unsteady Mixed Convection Flow of Non-Newtonian Nanofluid with Consideration of Retardation Time Effects. *Mathematics* 11 (8), 1892 (2023).
146. Kamel Al-Khaled, Venkateswaraju Konduru, Obulesu Mopuri, Charan Kumar Ganteda, M Ijaz Khan, Sami Ullah Khan, Basim M Makhdoum, Sayed M Eldin, Tasawar Abbas. Free convective oscillatory flow due to inclined perpendicular shield subject to the thermos-diffusion and suction effects. *Heliyon* 9 (4) (2023).
147. Lioua Kolsi, Kamel Al-Khaled, Sami Ullah Khan, Nidhal Ben Khedher. Effect of Thermal Radiation and Variable Viscosity on Bioconvective and Thermal Stability of Non-Newtonian Nanofluids under Bidirectional Porous Oscillating Regime. *Mathematics* 11(7) (2023).
148. Kamel Al-Khaled, Haneen Jafer. Two Reliable Computational Techniques for Solving the MRLW Equation. *Axioms* 12 (2), 174 (2023).
149. M Ahmad, Aliya Jabeen, Kamel Al-Khaled, Sami Ullah Khan, M Taj. Thermo-diffusion properties and active and passive control of migrated nanoparticles with zero and non-zero mass fluxes. *Waves in Random and Complex Media*, 1-23 (2023).

150. Muhammad Mubashir Bhatti, Kamel Al-Khaled, Sami Ullah Khan, Wathek Chammam, Muhammad Awais. DarcyForchheimer higher-order slip flow of EyringPowell nanofluid with nonlinear thermal radiation and bioconvection phenomenon. *Journal of Dispersion Science and Technology* 44 (2), 225-235 (2023)
151. Ali Raza, Kamel Al-Khaled, Taseer Muhammad, Sami Ullah Khan. Accelerating flow of carbon nanotubes with carboxymethyl cellulose and blood base materials with comparative thermal features: Prabhakar fractional model. *Mathematical Problems in Engineering* (2023)
152. Hong Yang, Aaqib Majeed, Kamel Al-Khaled, Tasawar Abbas, Muhammad Naeem, Sami Ullah Khan, Munazza Saeed. Significance of Melting Heat Transfer and Brownian Motion on Flow of PowellEyring Fluid Conveying Nano-Sized Particles with Improved Energy Systems. *Lubricants* 11 (1), 32 (2023).
153. Omar T Bafakeeh, Kamel Al-Khaled, Sami Ullah Khan, Amar Abbasi, Charankumar Ganteda, M Ijaz Khan, Kamel Guedri, Sayed M Eldin. On the Bioconvective Aspect of Viscoelastic Micropolar Nanofluid Referring to Variable Thermal Conductivity and Thermo-Diffusion Characteristics. *Bioengineering* 10 (1), 73 (2023).
154. Amer Darweesh, Kamel Al-Khaled, Omar Abue Al Yaqeen. Haar Wavelets Method for Solving Class of Coupled Systems of Linear Fractional Fredholm Integro-Differential Equations. Accepted, *Heliyon* (2023).

• **Ph.D Thesis, Supervisor, Co-Supervisor, Examination Committee**

1. (**Supervisor, Ph.D**) Anwar Al-Momani. Theory and computations for the non-linear Burgers' equation via the use of Sinc-Galerkin method, Feb., 2021.(University of Jordan).
2. (**Supervisor, Ph.D**)Imad A. Az-Zo'bi, A new convergence proof of the Adomian decomposition method for a mixed hyperbolic elliptic system of conservation laws, April, 2011.(University of Jordan).
3. (**Co-Supervisor, Ph.D**)Baker Wardat, An efficient method for solving nonlinear ordinary differential equations of order $2m$, (University of Damascus, Syria, Dec. 2013).
4. (Examiner, Ph.D) Some Contributions in Mathematical Biology, 2008, University of Kalyani, India
5. (Examiner, Ph.D) On Fractional Differintegration Operator and its Application in Solving Some Classes of Partial Differential Equations. Ph.D Thesis, University of Jordan (2002)
6. (Examiner, Ph.D) An efficient numerical method for solving systems of ordinary differential equations of fractional calculus. Ph.D Thesis, University of Jordan (2008)
7. (Examiner, Ph.D)Extreme Points of the Unit Ball of Certain Function and Operator Spaces. University of Jordan (2001).

• **Thesis, Supervisor, Co-Supervisor, Examination Committee**

1. (**Co-Supervisor**) Mathematical model for smoke from a high chimney, Al-albatt University (1999).
2. (**Co-Supervisor**) Finite Fourier transform on some boundary " value problems. Al-albatt University (2000)
3. (**Co-Supervisor**) Sinc solution of the generalized Burger's equation. Al-albatt University (2001).
4. (**Co-Supervisor**) Perturbation methods for solving chemical " Problems. Al-albatt University(2002)
5. (**Co-Supervisor-M. Sobeh**) Sinc Interpolation on $[0, 2\pi]$, Jordan Univ. " of Sci. and Tech.(2002)
6. (**Supervisor-M. Jaradat**) Decomposition Methods for Fourth-order Nonlinear Parabolic Equations, Jordan Univ. Sci. Tech. May, 2007.
7. (**Supervisor-Susan Akam**) Adomian decomposition method for systems modeled by ordinary differential equations , Jordan Univ. Sci. Tech. August, 2007.
8. (**Supervisor-Rasha Q.**) Soliton Solutions for nonlinear partial differential equations using the tanh method, Jordan Univ. Sci. Tech. Dec., 2007.
9. (**Supervisor-M. Saafeen**) Homotopy Perturbation method for fractional Horota-Satsuma KdV equations, Jordan Univ. Sci. Tech. May, 2008.

10. (**Supervisor-Amani Yunis**) Sinc solutions for nonlinear integro-differential equations , Jordan Univ. Sci. Tech. December, 2008.
11. (**Supervisor-Nadia Rashaideh**) Improving Newton's method by Adomian decomposition for non-linear optimization problems , Jordan Univ. Sci. Tech. December, 2008.
12. (**Supervisor-Salima M. Kebli**) Analytical solutions for some nonlinear problems using the variational iteration method , Jordan Univ. Sci. Tech. April, 2009.
13. (**Supervisor-Safa N. Taha**) The exact solutions to nonlinear diffusion equations obtained by differential transform method, Jordan Univ. Sci. Tech. August, 2009.
14. (**Supervisor-Ala al-Tainai**) Approximate Solutions for Systems of Integro-differential Equations with Applications to Biological Sciences, Jordan Univ. Sci. Tech. August, 2009.
15. (**Supervisor-Fawwaz Bataineh**) Numerical solutions for integral equations based on interpolation theory, Jordan Univ. Sci. Tech. Dec., 2009.
16. (**Supervisor-Maisoon Ababneh**), Homotopy perturbation method for solving non-linear differential equations linked with Green's function. Jordan Univ. Sci. Tech. May, 2010.
17. (**Supervisor-Sami Shukri**) The Extended Tanh Method For Solving Systems Of Nonlinear Wave Equations, Jordan Univ. Sci. Tech. July, 2010.
18. (**Supervisor-Hana Saror**) Solution of Optimization Problems Via He's Variational Iteration Method, Jordan Univ. Sci. Tech. May, 2011.
19. (**Supervisor-Imad Saleh Shiaab**) Modeling and Analysis of Prey-Predator System with Harvesting, Jordan Univ. Sci. Tech. May, 2011.
20. (**Supervisor-Naila Megdaddi**) Approximate solutions for 2nd and 4th order non-linear BVPs, Jordan Univ. Sci. Tech. May, 2018.
21. And many others.

- **Conferences and Presentations**

1. Convergence of Hermite Interpolation Operator At Zeros Of Jacobi Polynomials Of Second Kind, 3rd international conference and related sciences, Turkey, Nov. 20-22-2020 (online).
2. Sumudu Decomposition Method for Solving Higher-Order Nonlinear Volterra-Fredholm Fractional Integro-Differential Equations, 2nd INTERNATIONAL CONFERENCE ON MATHEMATICAL AND RELATED SCIENCES, April27-May1, 2109. Turkey, Antalya.
3. Wavelet-Based Numerical Scheme Compared with VIM for Solving Kawahara Equation, XXth international conference on Geometry, Integrability and Quantization, Bulgaria-Varna June 2-7, 2018.
4. Numerical wave solutions for nonlinear equations using sinc-collocation method, international conference on applied physics and Mathematics, Bangkok, Thailand Sept. 11-12, 2017.
5. Solutions of Fractional Reaction-Diffusion Equations Used to Model the Growth and Spreading of Biological Species, 15th INFORMS Computing Society Conference - January 15-17, 2017 o Austin, TX, USA.
6. Numerical Wave Solutions for Nonlinear Coupled Equations Using Sinc-Collocation Method, 17th International Conference on Applied Mathematics and Computation, Rome, Italy September 17 - 18, 2015.
7. Convergence of Sinc Methods Applied to Kuramoto-Sivashinsky equation, International conference on Mathematical, Computational and Statistical Sciences and Engineering, Singapore, Sept. 11-12, 2014.
8. Cardinal-type approximations for conservation laws of mixed type. 3rd international conference on numerical analysis and optimization, Muscat, Oman, Jan. 5-9, 2014.
9. Sinc-Galerkin Method for Solving Singularly Perturbed Fifth Order Boundary Value Problem, 9th International Conference on "Large-Scale Scientific Computations" June 3-7, 2013, Sozopol, Bulgaria.
10. B-Splines Solutions for PDEs with Applications, IV international Conference "Mathematical Analysis, Differential equations and their Applications, Turkey, Mersin, Sept. 4-9, 2012.

11. Variational Iteration Method for solving Optimization Problems, International Conference in Mathematics and Applications, Bangkok, Dec. 17-19, 2011.
12. Improving Newton's method for nonlinear optimization problems in several variables, Proceeding of the 11th international conference on computational and Mathematical methods, Spain- Benidorm, June 2011.
13. Levant Education Mission, British Council, March 1-2, 2011, Bristol Hotel, Amman-JORDAN.
14. Network-Centric Development: A Workshop on Innovation Linkage, Feb. 21, 2011, JUST, Irbid-JORDAN.
15. Extreme points for Hermite Interpolation Operator, International Conference on Mathematical Analysis 2010 7- 9 December 2010, Tawana Hotel, Bangkok, THAILAND
16. Second Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Sozopol, Bulgaria, June 21-26, 2010.
17. Eighth International Conference: Symmetry in Nonlinear Mathematical Physics June 21-27, 2009, Institute of Mathematics, National Academy of Sciences of Ukraine, Kyiv (Kiev), Ukraine.
18. The international Conference on Health and the changing the world. Bangkok Nov. 10-13, 2008. Title: Simulated Results for a Deterministic Model in Epidemiology of HIV/AIDS Dynamics.
19. Workshop: Water Resources in the Middle East, JUST-Jordan Oct. 19-21, 2008. Title: Mathematical Modeling to Simulate Movement of Underground Water.
20. International conference on Bio-Mathematics 2007,, Banding, Indonesia, 27-29, August 2007.
21. The international conference on modeling in chemical and Biological engineering, Oct. 24-27, 2006, Bangkok, Thailand.
22. 2nd international conference on Mathematical Sciences, UAE University Al-ain, Dec. 12-14, 2004 Numerical solutions of the Kawahara equation.
23. UAE Math. day, University of Sharjah, May, 8, 2003.
24. International conference on wavelets and their applications, Madras, India, Jan. 4-8, 2002.
25. Spring school on function spaces and interpolation, Czech Republic, May 27-June 2, 2001.
26. ALGORITHMY, 15th conference on scientific computing, Vysoke Tatry-Podbanke, Slovakia. Sep. 10-15, 2000.
27. GAMMA Workshop on adaptive Methods-Error Estimates, Keil-Germany, Jan. 2000.
28. A Summer visit to the University of Nebraska-Lincoln (USA), June 27-Sep. 3, 1999.
29. The 4th international conference on theoretical and computational acoustics. Trieste (May, 1999) Italy.
30. The 4th international conference in numerical methods and applications. Sofia (Aug., 1998) Bulgaria.

- **Research Grants**

1. Proposal title: "Modeling and Control of Piezoelectric Ultrasonic Actuator in Ultrasonically Assisted Machining" Authors: Ashraf Saleem, FaicalMnif, Abdullah Ozer, **Kamel Al-Khaled**, and Khurshid Alam, Fund Value: \$26000.
2. 1. Proposal title: "Sinc-Galerkin Method for positive solutions of Non-linear two points boundary value problems" Authors: Kamel Al-Khaled Role: Principle Investigator Fund Value: \$5000. Years: 2015 and 2016
3. Many Internal projects for master students.

- **References**

1. Professor Thomas Shores(My Ph.D Advisor), Dept. of Mathematics and Stat. The University of Nebraska-Lincoln(UNL), Lincoln, NE-68588. tshores@math.unl.edu
2. Professor Radwan Al-Jarrah(My Master Advisor) Dean of the College of Arts and Sciences at Abu Dhabi University. radwan.aljarrah@adu.ac.ae

3. Professor Ahmed D. Alawneh, Dept of Mathematics, The university of Jordan, Amman-Jordan, alawneh@sci.ju.edu.jo
4. Professor Roshdi Khalil, Dept of Mathematics, The university of Jordan, Amman-Jordan, roshdi@ju.edu.jo