

Curriculum Vitae

Professor Shaher Momani



(ISI Highly Cited Researcher)

Dean, College of Humanities and Sciences,
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Department of Mathematics, The University of Jordan,
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Website: <http://eacademic.ju.edu.jo/S.Momani/default.aspx>

Personal Data

- Full Name: Shaher Mohammad Ahmad Momani
- Date of Birth: May 10, 1962
- Place of Birth: Ajloun-Jordan
- Nationality: Jordanian
- Sex: Male
- Marital Status: Married, two daughters and two sons
- Profession: Distinguished Professor of Mathematics at The University of Jordan and Ajman University

Academic Qualification

- **Ph.D. in Mathematics, Applied Mathematics (Non-Newtonian Fluid Mechanics)**

University: University of Wales, United Kingdom, 1991.

Title of Thesis: Some Problems in Non-Newtonian Fluid Mechanics.

Advisor: Professor Ken Walters, FRS.

- **B.Sc. in Mathematics**

University: Yarmouk University, Jordan, 1984.

Academic Honors and International Prizes

1. **The Order of King Abdullah II Ibn Al Hussein for Excellence of the Second Class for my Academic Contributions in Scientific Research, 2016.**
2. **Recognized by King Abdullah II Ibn Al Hussein as a Jordanian Star of Science in Mathematics, 2017**
3. **Named in world's top 2% scientists' list according to the prestigious Stanford University, 2020.**
4. **ISI Highly Cited Researcher in Cross-Field according to the Web of Science: 2018.**
5. **ISI Highly Cited Researcher in Mathematics the Web of Science: 2014, 2015, 2016 and 2017.**
6. **I have been named by Clarivate Analytics (formerly Thomson Reuters) as one of the World's Most Influential Scientific Minds in 2014, 2015, 2016, 2017 and 2018.**
7. **I have been named as the first Distinguished Professor at The University of Jordan since its inception in 1962, 2018-present.**
8. **I received an honorary doctorate from The Institute of Management and Commercial Sciences in Geneva, Switzerland, in recognition of my novel contribution to scientific research in Jordan, as well as for my outstanding research on Fractional Calculus, 2018.**
9. **Distinguished Adjunct Professor, King Abdulaziz University, Jeddah, Saudi Arabia, 2014-2019.**
10. **The Abdul Hameed Shoman Award for Arab Researchers, 2019.**
11. **Liouville Award for lifetime achievement in fractional calculus: First Online Conference On Modern Fractional Calculus And Its Applications (OCMFCA-2020), Biruni University, Istanbul, Turkey, 2020.**
12. **Mittag-Leffler Award: FDA Achievement Award, The ICFDA18 International Conference on Fractional Differentiation and its Applications, Amman, Jordan, 2018.**
13. **Mango Distinguished Researcher Prize in Jordan, 2016.**
14. **The Distinguished Researcher Prize in Jordan, 2012.**
15. **The Distinguished Researcher Prize at The University of Jordan, 2012.**
16. **The Islamic Educational, Scientific and Cultural Organization Science Prize "ISESCO Science Prize", 2008.**

17. The Scopus Prize for Jordan Scientists, 2009.
18. The Distinguished Researcher Prize at Mutah University, 2009.
19. TWAS Prize for the Young Scientists, Third World Academic Sciences, Italy, 2000.
20. Who's Who Prize, 2006.
21. The Award of Jordan National Commission For Education, Culture and Science, 2008.
22. Classified as **one of the top ten scientists in the world** in fractional differential equations according to **Clarivate Analytics** in 2008-2015.
23. Classified as the **top scientist in the world in terms of publications** in fractional differential equations according to **Clarivate Analytics and Scopus** databases in 2008-2015.
24. The Highest Total Citations in Mathematics in the World during 2001-2011 According to Clarivate Analytic (Science Watch).
25. The most recent ***h*-Index** for Shaher Momani is **56** and the number of **Citations** is **10048** according to **Scopus Database** in May 2020.
26. The most recent ***h*-Index** for Shaher Momani is **71** and the number of **Citations** is **16040** according to **Google Scholar** in May 2020.
27. Nominated for the Nobel Prize in Physics for 2016 by many scholars and institutions throughout the Arab world.
28. Elected as a Fellow of the Islamic-World Academy of Sciences (FIAS) in 2017.
29. Principal Investigator (PI) in the Highly Cited Project "Mathematical modelling and analysis of some complex nonlinear dynamical systems containing fractional derivatives" Supported by Ajman University, September 2010 to October 2020.
30. Investigator in the international project "Harnessing the worlds academies to combat predatory academic journals and conferences" Supported by the The InterAcademy Partnership (IAP), Washington DC, USA, May 2020 to April 2022.
31. Principal Investigator (PI) in the international project "Mathematical modeling of the pandemic coronavirus (COVID-19) outbreak through fractional derivatives" Supported by Microsoft AI for Health COVID-19 grant - ID:00011000040, September 2020 to August 2022.
32. Principal Investigator (PI) in the international project "Fractional calculus approach for detection and segmentation of COVID-19 Coronavirus in CT Lung Scans" Supported by Microsoft AI for Health COVID-19 grant - ID:00011000021, September 2020 to August 2022.

Experience

- **Dean of College of Humanities and Sciences, Ajman University, Ajman, UAE, August 2019 to present.**
- **Dean of Scientific Research, The University of Jordan, September 2016 to September 2018.**
- **Dean of Faculty of Science, The University of Jordan, September 2014 to September 2016.**

- Head of Department of Mathematics, The University of Jordan, September 2012 to September 2014.
- Member of the Board of Trustees of Princess Sumaya University for Technology, September 2010 to Present.
- Member of Basic Sciences Committee, Scientific Research Support Fund (SRSF), 2010-2012.
- Editor-in-Chief: Numerical and Computational Methods in Sciences and Engineering.
- Editor-in-Chief: Arab Journal Of Mathematics And Mathematical Sciences (AJMMS).
- Founder of Jordan Research Group in Applied Mathematics (JRGAM).
- Professor: The University of Jordan, September 2009 to present.
- Professor: Mutah University, September 2007 to 2009.
- Professor: Qatar University, September 2006 to September 2007.
- Associate Professor: Mutah University, September 2004 to September 2006.
- Associate Professor: Jordan University, Summer course 2004.
- Associate Professor: United Arab Emirates University, September 2001 to September 2004.
- Associate Professor: Yarmouk University, September 2000 to September 2001.
- Associate Professor: Mutah University, November 1998 to September 2000.
- Assistant Professor: Mutah University, September 1991 to November 1998.
- Head, Department of Mathematics, Mutah University, September 1994 to September 1995.

Research Interests

My general research interests are in the areas of applied mathematics, Non-Newtonian Fluid Mechanics, differential equations and numerical analysis, fractional calculus and fractional differential equations. More specifically, my research interests can be summarized as follows:

1. Mathematical modelling;
2. Fractional Dynamical Systems;
3. Numerical solution of ordinary and partial differential equations of fractional order;
4. Theory of fractional differential equations and integral equations;
5. Newtonian and non-Newtonian fluid mechanics;
6. Stability of fractional linear systems;
7. Fractional Order Modeling and Control in Biomedical Engineering;
8. Variational inequalities and obstacle problems;
9. Mathematical biology;
10. Mathematical physics;

Editor

1. Editor-in-Chief, Dirasat Journal: Educational Sciences: 2016-2018.
2. Editor-in-Chief, Dirasat Journal: Human and Social Sciences: 2016-2018. (**Indexed in Scopus Database**).
3. Editor-in-Chief, Dirasat Journal: Sharia and Law Sciences: 2016-2018.
4. Editor-in-Chief: Numerical and Computational Methods in Sciences and Engineering.
5. Editor-in-Chief, Arab Journal of Mathematics and Mathematical Sciences.
Website: <http://www.ripublication.com/ajmms.htm>
6. Member, Editorial Board, Jordan Journal of Mathematics and Statistics. (**Indexed in Scopus Database**).
7. Member, Editorial Board, Applied Numerical Mathematics Journal. **ISI (IF: 1.263)**.
Website: <https://www.journals.elsevier.com/applied-numerical-mathematics>
8. Member, Editorial Board, Applied Mathematics & Information Sciences Journal. **ISI (IF: 0.73)**.
Website: <http://naturalspublishing.com/>
9. Member, Editorial Board, Journal of Applied and Computational Mathematics. **ISI (IF: 1.33)**.
10. Member, Editorial Board, Progress in Fractional Differentiation and Applications Journal.
11. Member, Editorial Board, Khazar Journal of Science and Technology (KJSAT).
12. Member, Editorial Board, Applied Mathematics & Information Sciences Letters Journal.
Website: <http://naturalspublishing.com/>
13. Member, Editorial Board, International Journal of Information and Communication Technology Research.
Website: <http://www.esjournals.org/>
14. Member, Editorial Board, International Journal of Differential Equations. (**Indexed in Scopus Database**).
Website: <http://www.hindawi.com/journals/ijde/editors.html>
15. Member, Editorial Board, International Journal of Differential Equations: Special Issue on Fractional Differential Equations.
Website: <http://downloads.hindawi.com/journals/specialissues/0552010002.pdf>
16. Member, Editorial Board, Journal of Emerging Trends in Computing and Information Sciences.
Website: <http://www.cisjournal.org/>
17. Member, Editorial Board, ARPN Journal of Systems and Software. **ISI (IF: 0.73)**.
Website: <http://scientific-journals.org/>
18. Member, Editorial Board, World Journal of Modelling and Simulation (WJMS). (**Indexed in Scopus Database**).
Website: <http://www.wjms.org.uk/>
19. Member, Editorial Board, Communications in Fractional Calculus: Mathematics, Physics and Mechanics.
Website: <http://www.nonlinearscience.com/>

20. Member, Editorial Board, Communications in Fractional Calculus.
Website: <http://www.nonlinearscience.com/>
21. Member, Editorial Board, Journal of Fractional Calculus and Its Applications.
Website: <http://www.fcaj.webs.com/>
22. Member, Editorial Board, International Journal of Computational Mathematics and Numerical Simulation (IJCMNS).
Website: <http://mcm.edu.cn/ijcmns/othereditors2.htm>
23. Member, Editorial Board, Journal of Nonlinear and Fractional Phenomena in Science and Engineering.
Website: <http://www.jnfpse.com/index.htm>
24. Member, Editorial Board, Fractional Dynamic Systems Journal.
Website: <http://fds.ele-math.com/>
25. Member, Editorial Board, Applied Mathematics & Information Sciences Journal.
Website: <http://amis.dixiewpublishing.com/>
26. Member, Editorial Board, Jordan Engineers Association Journal of Electrical Engineering (JEA-JEE).
27. Member, Editorial Board, International Review of Pure and Applied Physics Journal.
28. Member, Editorial Board, International Journal of Nonlinear Dynamical Systems and Chaos(IJNDSC).
Website: <http://www.gbspublisher.com/ijndsc1.htm>
29. Member, Editorial Board, International Journal of Nonlinear Dynamics in Engineering and Sciences.
Website:<http://www.serialspublications.com/>
30. Member, Editorial Board, Mutah Journal for Scientific Research, 2004-2005.
Website: <http://www2.mutah.edu.jo/dar/arabic/abstracs/edibo05s.htm>
31. Member, Editorial Board, Communications in Numerical Analysis.
Website: <http://www.ispacs.com/cna/>
32. Member, Editorial Board, International Journal of Applied Mathematical Research (IJAMR).
Website: <http://www.sciencepubco.com/index.php/ijamr>
33. Member, Editorial Board, Conference Papers in Mathematics Journal.
Website: <http://www.cpis.com/journals/mathematics/>
34. Member, Editorial Board, Malaya Journal of Matematik [MJM].
Website: <http://jml2012.indexcopernicus.com/Malaya+Journal+of+Matematik,p2794,3.html>
35. Member, Editorial Board, Applied Mathematics and computational Intelligence
Website: <http://amci.unimap.edu.my/>

Reviewer

- Journal of Computational and applied Mathematics.
- Journal of Mathematical Analysis and Applications.
- Physics Letters A.
- Physica Scripta.
- Electronic Journal of Differential Equations.
- Communications in Nonlinear Science and Numerical Simulation.
- Chaos, Solitons & Fractals.
- Journal of Applied Analysis.
- Arabian Journal for Science and Engineering.
- Computers and Mathematics with Applications.
- International Journal of Computer Mathematics.
- Journal of Applied Mathematics.
- International Journal of Mathematics and Mathematical Sciences.
- Numerical Methods for Partial Differential Equations.
- Referee for several international and local journals.

Membership

1. Member of the International Who's Who, since 2006.
2. Member of the Jordanian Mathematics Society, since 1991.
3. Member of the Exactive Committee of the Jordanian Mathematics Society, 1994-1996.
4. Member of the British Society of Rheology, since 1989.
5. Member of Newton Institute of Non-Newtonian Fluid Mechanics. University of Wales.
6. Member of the American Mathematical Society, since 1996.
7. Leader of Jordan Research Group in Applied Mathematics (JRGAM), Jordan, 2005 – Present.
8. Member of the fractional calculus and its applications cuminuty.
[http:http://www.tuke.sk/podlubny/fc.html](http://www.tuke.sk/podlubny/fc.html)
9. Member of the Research Group in Mathematical Inequalities and Applications (RGMIA).

Committee Service

Coordinator and Member of Several Internal Committees at the Following Universities:

- **Mutah University: 1991-2000, 2004-2006 and 2007-2009.**
- **Yarmouk University: 2000-2001.**
- **United Arab Emirates University: 2001-2004.**
- **Qatar University: 2006-2007.**
- **The University of Jordan: 2009-present.**
- **Ajman University, Ajman-UAE: 20019-present.**
- **Outside Universities:**
 1. Member of the Committee for Maths. Department of Irbid Private Univ.
 2. Member of the Committee for Maths. Department of Zarqa Private Univ.
 3. Member of the Committee for Maths. Department of Ziatounah Private Univ.
 4. Coordinator of the Committee for Maths. Department of Jadara Private Univ.
 5. Referee for Research Papers Publish in Various Journals.
 6. Member of a Defense exam Committee for Several Master Theses in Jordan Universities.
 7. Chaired a Session of the Third Jordanian Mathematics Conference, 1996.
 8. Chaired a Session of the Fifth Annual U. A. E. University Conference, 2004.
 9. Chaired a Session of the Recent Advances in Mathematics Conference, India, 2004.
 10. Member of the Exactive Committee of Qualification Exam at Jordan Universities.
 11. Chaired a Session of The Third Conferences On Research And Education In Mathematics, Malaysia 2007.
 12. Member of the Organizing Committee of The 2nd International Symposium on Nonlinear Dynamics, Shanghai, China, 2007.
 13. Chaired a Mini-Symposium in The 2nd International Symposium on Nonlinear Dynamics, Shanghai, China, 2007.
 14. Member of the International Program Committee of The Third IFAC Workshop on Fractional Differentiation and its Applications, Turkey, 2008.
 15. Member of the International Program Committee of The Fourth IFAC Workshop on Fractional Differentiation and its Applications, Spain, 2010.
 16. Member of the International Program Committee of The Fourth IFAC Workshop on Fractional Differentiation and its Applications, China, 2012.

Computer Skills

1. Mathematical Software: Mathematica, Fortran, Maple, Matlab.
2. Typesetting Software: Tex, LaTeX, Scientific Workplace, MicroSoft Word.
3. MCDL: Mutah Computer Drive License.

Published and Accepted Papers

- **Remark 1. ISI:** The Journal is Listed in Clarivate Analytics Web of Science (Formerly ISI Web of Knowledge).
 - **Remark 2. IF:** The Impact Factor for the Journal According to Journal Citation Reports (JCR) Released by Clarivate Analytics in 2019.
 - **Remark 3. Scopus:** The Journal is indexed in Scopus. Q1 to Q4: The journal ranking quartiles. Q1*: The journal is among the top 10%.
1. **G. Georgiou, Shaher Momani, M. J. Crochet, and K. Walters**, Newtonian and non-Newtonian flow in a channel obstructed by an antisymmetric array of cylinders, *Journal of Non-Newtonian Fluid Mechanics*, Vol. **40**, (1991) 231-260. **ISI (IF: 2.270)**, [**Scopus: Q1**].
 2. **S. Hadid, B. Maseadeh and Shaher Momani**, On the existence of maximal and minimal solutions of differential equations of non-integer order, *Journal of Fractional Calculus*, Vol. **9**, (1996) 41-44.
 3. **S. B. Hadid, A. A. Ta'ani and S. M. Momani**, Some existence theorems on differential equations of generalized order through a fixed-point theorem, *Journal of Fractional Calculus*, Vol. **9**, (1996) 45-49.
 4. **B. Maseadeh, S. Momani and S. Hadid**, Solutions of differential equations of non-integer order in L^2 and C spaces, *Mutah Journal for Research and Studies*, Vol. **12**(1), (1997) 169-181.
 5. **Shaher Momani**, The flow of non-Newtonian fluids through corrugated pipes, *Mu'tah Journal for Research and Studies*, Vol. **12**(4), (1997) 91-112.
 6. **S. Momani and S. Hadid**, An algorithm for numerical solutions of fractional order differential equations, *Journal of Fractional Calculus*, Vol. **15**, (1998) 61-66.
 7. **S. M. Momani and K. Walters**, The flow of non-Newtonian fluids through curved pipes, *Al-Dirasat Journal*, Vol. **26**(1), (1999) 74-87. [**Scopus: Q3**].
 8. **S. M. Momani**, On existence of solutions of a system of ordinary differential equations of fractional order, *Far East Journal of Mathematical Sciences (FJMS)*, Vol. **1**(2), (1999) 265-270. [**Scopus: Q4**].
 9. **S. M. Momani**, Variation of solutions of differential equations of non-integer order with respect to initial condition and parameters, *Far East Journal of Mathematical Sciences (FJMS)*, Vol. **1**(3), (1999) 423-428. [**Scopus: Q4**].
 10. **S. M. Momani**, Stress distribution and pressure gradient of non-Newtonian fluids through converging ducts, *Mu'tah Lil-Buhooth Wa Al-Dirasat Journal*, Vol. **15**(1), (2000) 9-26.
 11. **S. M. Momani**, Local and global uniqueness theorems on differential equations of non-integer order via Gronwall's and Bihari's inequalities, *Revista Technica Journal*, Vol. **23**(1), (2000) 66-69. **ISI (IF: 0.033)**, [**Scopus: Q4**].
 12. **Shaher Momani**, Numerical solution of differential equations of non-integer order by the generalized difference method, *Al-Zarqa Private University Journal*, Vol. **2**(1), (2000) 1-7.
 13. **S. M. Momani**, On the existence of ε -approximate solutions of differential equations of non-integer order, *PanAmerican Mathematical Journal*, Vol. **10**(3), (2000) 61-69. [**Scopus: Q4**].

14. **Shaher M. Momani**, Local and global existence theorems on fractional integro-differential equations, *Journal of Fractional Calculus*, Vol. **18**, (2000) 81-86.
15. **Shaher M. Momani and Reyad El-Khazali**, On the existence of extremal solutions of fractional integro-differential equations, *Journal of Fractional Calculus*, Vol. **18**, (2000) 87-92.
16. **S. M. Momani**, The flow of non-Newtonian fluids through rotating pipes, *Al-Manara Journal*, Vol. **7**(1) (2001), 9-25.
17. **Shaher Momani**, Some existence theorems on fractional integro-differential equations, *Abhath Al-Yarmouk Journal*, Vol. **10**(2B), (2001) 435-444.
18. **S. M. Momani and S. B. Hadid**, Asymptotic behaviour of the maximal and minimal solutions of differential equations of non- integer order, *Far East Journal of Mathematical Sciences (FJMS)*, Vol. **6**(1), (2002) 31-39. [**Scopus: Q4**].
19. **S. M. Momani and S. B. Hadid**, Dependence of solutions of differential equations of non-integer order on initial conditions and parameters, *Al-Manara Journal*, Vol. **9**(2), (2003) 69-76.
20. **Reyad El-Khazali, Shaher Momani**, Stability analysis of composite fractional systems, *International Journal of Applied Mathematics*, Vol. **12**(1), (2003) 73-85. [**Scopus: Q4**].
21. **S. M. Momani and S. B. Hadid**, On the inequalities of integro-differential fractional equations, *International Journal of Applied Mathematics*, Vol. **12**(1), (2003) 29-37. [**Scopus: Q4**].
22. **S. M. Momani and S. B. Hadid**, Some comparison results for integro-fractional differential inequalities, *Journal of Fractional Calculus*, Vol. **24**, (2003) 37-44.
23. **S. M. Momani, S. B. Hadid and Z. M. Alawaneh**, Some analytical properties of solutions of differential equations of the noninteger order, *International Journal of Mathematics and Mathematical Sciences*, Vol. **2004**(13), (2004) 697-701. [**Scopus: Q3**].
24. **Shaher Momani**, Analytical solutions of strongly non-linear oscillators by the decomposition method, *International Journal of Modern Physics C (IJMPC)*, Vol. **15**(7), (2004) 967-979. **ISI (IF: 1.017)**, [**Scopus: Q3**].
25. **Shaher Momani and Samir Hadid**, Lyapunov stability solutions of fractional integro-differential equations, *International Journal of Mathematics and Mathematical Sciences*, Vol. **2004**(47), (2004) 2503-2507, [**Scopus: Q3**].
26. **Shaher Momani and Kamel Al-Khaled**, Numerical solutions for systems of fractional differential equations by the decomposition method, *Applied Mathematics and Computation*, Vol. **162**(3), (2005) 1351-1365. **ISI (IF: 3.092)**, [**Scopus: Q1***].
27. **S. M. Momani and S. B. Hadid**, On the continuous dependence of solutions of integro-fractional differential equations with respect to initial conditions, *Nonlinear Functional Analysis and Applications*, Vol. **10**(3), (2005) 379-386. (**Scopus: Q4**).
28. **Kamel Al-Khaled and Shaher Momani**, An approximate solution for a fractional diffusion-wave equation using the decomposition method, *Applied Mathematics and Computation*, Vol. **165**(2), (2005) 473-483. **ISI (IF:3.092)**, [**Scopus: Q1***].
29. **Shaher Momani**, Analytical approximate solution for fractional heat-like and wave-like equations with variable coefficients using the decomposition method, *Applied Mathematics and Computation*, Vol. **165**(2), (2005) 459-472. **ISI (IF:3.092)**, [**Scopus: Q1***].

30. **Shaher Momani, Khaled Moadi and Muhammad Aslam Noor**, Modified decomposition method for solving a system of third-order obstacle problems, *International Journal of Pure and Applied Mathematics*, Vol. **21**(1), (2005) 97-107. [Scopus: Q4].
31. **Shaher Momani**, An explicit and numerical solutions of the fractional KdV equation, *Mathematics and Computers in Simulation*, Vol. **70**(2), (2005) 110-118. ISI (IF: 1.409), [Scopus: Q2].
32. **Shaher Momani**, A numerical scheme for the solution of Sivashinsky equation, *Applied Mathematics and Computation*, Vol. **168**(2), (2005) 1273-1280. ISI (IF:3.092), [Scopus: Q1*].
33. **Shaher Momani**, Analytic and approximate solutions of the space- and time-fractional telegraph equations, *Applied Mathematics and Computation*, Vol. **170**(2), (2005) 1126-1134. ISI (IF:3.092), [Scopus: Q1*].
34. **Kamel Al-Khaled, Shaher Momani and Ahmed Alawneh**, Approximate wave solutions for a generalized Benjamin-Bona-Mahoy-Burgers equation, *Applied Mathematics and Computation*, Vol. **171**(1), (2005) 281-292. ISI (IF:3.092), [Scopus: Q1*].
35. **Muhammad Aslam Noor, S. K. Mishra and Shaher Momani**, Properties of approximate preinvex functions, *Nonlinear Analysis Forum Journal*, Vol. **10**(2), (2005) 1-9.
36. **Shaher Momani and Salah Abuasad**, Application of He's variational iteration method to Helmholtz equation, *Chaos, Solitons & Fractals*, Vol. **27**(5), (2006) 1119-1123. ISI (IF: 3.064), [Scopus: Q1*].
37. **Zaid Odibat and Shaher Momani**, Application of variational iteration method to nonlinear differential equations of fractional order, *International Journal of Nonlinear Science and Numerical Simulation*, Vol. **7**(1), (2006) 27-34. ISI (IF: 1.162), [Scopus: Q2].
38. **Shaher Momani**, Non-perturbative analytical solutions of the space- and time-fractional Burgers equations, *Chaos, Solitons & Fractals*, Vol. **28**(4), (2006) 930-937. ISI (IF: 3.064), [Scopus: Q1*].
39. **Shaher Momani, Khaled Moadi and Muhammad Aslam Noor**, Decomposition method for solving fourth order obstacle problems, *Applied Mathematics and Computation*, Vol. **175**(2), (2006) 923-931. ISI (IF:3.092), [Scopus: Q1*].
40. **Shaher Momani**, Solving a system of second-order obstacle problems a modified decomposition method, *Applied Mathematics E-Notes*, Vol. **6**, (2006) 141-147. [Scopus: Q4].
41. **Shaher Momani and Zaid Odibat**, Analytical approach to linear fractional partial differential equations arising in fluid mechanics, *Physics Letters A*, Vol. **355**, (2006) 271-279. ISI (IF: 2.087), [Scopus: Q1*].
42. **Shaher Momani and Zaid Odibat**, Analytical solution of a time-fractional Navier-Stokes equation by Adomian decomposition method, *Applied Mathematics and Computation*, Vol. **177**, (2006) 488-494. ISI (IF:3.092), [Scopus: Q1*].
43. **Shaher Momani and Khaled Moadi**, A reliable algorithm for solving fourth-order boundary value problems, *Journal of Applied Mathematics and Computing*, Vol. **22**(3), (2006) 185-197. [Scopus: Q2].
44. **Ziad Odibat and Shaher Momani**, Approximate solutions for boundary value problems of time-fractional wave equation, *Applied Mathematics and Computation*, Vol. **181**(1), (2006) 767-774. ISI (IF:3.092), [Scopus: Q1*].

45. **Shaher Momani** and **Rami Qaralleh**, An efficient method for solving systems of fractional integro-differential equations, *Computers and Mathematics with Application*, Vol. **52**(3-4), (2006) 459-470. **ISI (IF: 2.811)**, [**Scopus: Q1***].
46. **Ziad Odibat** and **Shaher Momani**, Analytical spherically symmetric solution for the time-fractional Navier-Stokes equation, *Advances in Theoretical and Applied Mathematics (ATAM)*, Vol. **1**(2), (2006) 97-107.
47. **Shaher Momani** and **Muhammad Aslam Noor**, Numerical methods for fourth-order fractional integro-differential equations, *Applied Mathematics and Computation*, Vol. **182**(1), (2006) 754-760. **ISI (IF:3.092)**, [**Scopus: Q1***].
48. **Shaher Momani**, A numerical scheme for the solution of multi-order fractional differential equations, *Applied Mathematics and Computation*, Vol. **182**(1), (2006) 761-770. **ISI (IF:3.092)**, [**Scopus: Q1***].
49. **Shaher Momani** and **Nabil Shawagfeh**, Decomposition method for solving the fractional Riccati differential equation, *Applied Mathematics and Computation*, Vol. **182**(2), (2006) 1083-1092. **ISI (IF:3.092)**, [**Scopus: Q1***].
50. **Shaher Momani** and **Rami Qaralleh**, Analytical approximate solution for a nonlinear fractional integro-differential equation, *Nonlinear Analysis Forum Journal*, Vol. **11**(2), (2006) 237-249.
51. **Shaher Momani**, **Salah Abuasad** and **Zaid Odibat**, Variational iteration method for solving non-linear boundary value problems, *Applied Mathematics and Computation*, Vol. **183**, (2006) 1351-1358. **ISI (IF:3.092)**, [**Scopus: Q1***].
52. **Shaher Momani**, General solutions for the space- and time-fractional diffusion-wave equation, *Journal of Physical Sciences*, Vol. **10**, (2006) 30-43.
53. **Shaher Momani** and **Zaid Odibat**, Numerical comparison of methods for solving linear differential equations of fractional order, *Chaos, Solitons & Fractals*, Vol. **31**(5), (2007) 1248-1255. **ISI (IF: 3.064)**, [**Scopus: Q1***].
54. **Shaher Momani**, An algorithm for solving a nonlinear fractional convection-diffusion problem, *Communications in Nonlinear Science and Numerical Simulation*, Vol. **12**(7), (2007) 1283-1290. **ISI (IF: 3.967)**, [**Scopus: Q1***].
55. **Shaher Momani** and **Zaid Odibat**, Numerical approach to differential equations of fractional order, *Journal of Computational and Applied Mathematics*, Vol. **207**(1), (2007) 96-110. **ISI (IF: 1.883)**, [**Scopus: Q1**].
56. **Shaher Momani** and **Zaid Odibat**, Fractional Green's function for linear fractional inhomogeneous partial differential equations in fluid mechanics, *Journal of Applied Mathematics and Computing*, Vol. **24**, (2007) 167-178. [**Scopus: Q2**].
57. **Shaher Momani** and **Rami Qaralleh**, Numerical approximations and Pade approximants for a fractional population growth model, *Applied Mathematical Modelling*, Vol. **31**(9), (2007) 1907-1914. **ISI (IF: 2.8841)**. , [**Scopus: Q1***].
58. **Shaher Momani** and **Ziad Odibat**, Comparison between homotopy perturbation method and the variational iteration method for linear fractional partial differential equations, *Computers and Mathematics with Applications*, Vol. **54**, (2007) 910-919. **ISI (IF: 2.811)**, [**Scopus: Q1***].

59. **Vedat Suat Erturk and Shaher Momani**, Comparing numerical method for solving fourth-order boundary value problems, *Applied Mathematics and Computation*, Vol. **188**, (2007) 1963-1968. **ISI (IF:3.092)**, [**Scopus: Q1***].
60. **Rabha Ibrahim and Shaher Momani**, On the existence and uniqueness of solutions of a class of fractional differential equations, *Journal of Mathematical Analysis and Applications*, Vol. **334**(1), (2007) 1-10. **ISI (IF: 1.188)**, [**Scopus: Q2**].
61. **Shaher Momani and Ziad Odibat**, Homotopy perturbation method for nonlinear partial differential equations of fractional order, *Physics Letters A*, Vol. **365**, (2007) 345-350. **ISI (IF: 2.087)**, [**Scopus: Q2**].
62. **Zaid Odibat and Shaher Momani**, A reliable treatment of homotopy perturbation method for Klein-Gordon equations, *Physics Letters A*, Vol. **365**, (2007) 351-357. **ISI (IF: 2.087)**, [**Scopus: Q2**].
63. **Khalida Inayat Noor, Muhammad Aslam Noor and Shaher Momani**, Modified Householder iterative method for nonlinear equations, *Applied Mathematics and Computation*, Vol. **190**, (2007) 1534-1539. **ISI (IF:3.092)**, [**Scopus: Q1***].
64. **Shaher Momani and Muhammad Aslam Noor**, Numerical comparison of methods for solving a special fourth-order boundary value problem, *Applied Mathematics and Computation*, Vol. **191**, (2007) 218-224. **ISI (IF:3.092)**, [**Scopus: Q1***].
65. **Rabha Ibrahim and Shaher Momani**, Multiple solutions for multi-order fractional differential equations, *Arab Journal of Mathematics and Mathematical Sciences*, Vol. **1**, (2007) 28-34.
66. **Shaher Momani**, A decomposition method for solving unsteady convection-diffusion problems, *Turkish Journal of Mathematics*, Vol. **31**, (2007) 1-10. **ISI (IF: 0.597)**, [**Scopus: Q3**].
67. **Vedat Suat Erturk and Shaher Momani**, A reliable algorithm for solving tenth-order boundary value problems, *Numerical Algorithms*, Vol. **44**(2), (2007) 147-158. **ISI (IF: 2.417)**, [**Scopus: Q1**].
68. **Zaid Odibat and Shaher Momani**, Numerical solution of Fokker-Planck equation with space- and time-fractional derivatives, *Physics Letters A*, Vol. **369** (2007), 349-358. **ISI (IF: 2.087)**, [**Scopus: Q2**].
69. **Shaher Momani, Zaid Odibat and Vedat Suat Erturk**, Generalized differential transform method for solving a space- and time-fractional diffusion-wave equation, *Physics Letters A*, Vol. **370**, (2007) 379-387. **ISI (IF: 2.087)**, [**Scopus: Q2**].
70. **Hossien Jafari and Shaher Momani**, Solving fractional diffusion and wave equations by modified homotopy perturbation method, *Physics Letters A*, Vol. **370**, (2007) 388-396. **ISI (IF: 2.087)**, [**Scopus: Q2**].
71. **Zaid Odibat and Shaher Momani**, Numerical methods for nonlinear partial differential equations of fractional order, *Applied Mathematical modelling*, Vol. **32**, (2008) 28-39. **ISI (IF: 2.841)**, [**Scopus: Q1***].
72. **Shaher Momani and Rabha Ibrahim**, On a fractional integral equation of periodic functions involving Weyl-Riesz operator in Banach algebras, *Journal of Mathematical Analysis and Applications*, Vol. **339**, (2008) 1210-1219. **ISI (IF: 1.188)**, [**Scopus: Q2**].
73. **Zaid Odibat and Shaher Momani**, Modified homotopy perturbation method: application to quadratic Riccati differential equation of fractional order, *Chaos, Solitons & Fractals*, Vol. **36**, (2008) 167-174. **ISI (IF: 3.064)**, [**Scopus: Q1***].

74. **Zaid Odibat and Shaher Momani**, A generalized differential transform method for linear partial differential equations of fractional order, *Applied Mathematics Letters*, Vol. **21**, (2008) 194-199. **ISI (IF: 3.487)**, [**Scopus: Q1***].
75. **Shaher Momani and Ziad Odibat**, A novel method for nonlinear fractional partial differential equations: Combination of DTM and generalized Taylor's formula, *Journal of Computational and Applied Mathematics*, Vol. **220**, (2008) 85-95. **ISI (IF: 1.883)**, [**SJR: Q1**].
76. **G. H. Erjaee and Shaher Momani**, Phase synchronization in fractional differential chaotic systems. *Physics Letters A*, Vol. **372**, (2008) 2350-2354. **ISI (IF: 2.087)**, [**Scopus: Q2**].
77. **Vedat Suat Erturk Shaher Momani, and Zaid Odibat**, Application of generalized differential transform method to multi-order fractional differential equations, *Communications in Non-linear Science and Numerical Simulation*, Vol. **13**, (2008) 1642-1654. **ISI (IF: 3.967)**, [**Scopus: Q1***].
78. **Vedat Suat Erturk and Shaher Momani**, Solving systems of fractional differential equations using differential transform method, *Journal of Computational and Applied Mathematics*, Vol. **215**, (2008) 142-151. **ISI (IF: 1.883)**, [**Scopus: Q1**].
79. **Shaher Momani and Vedat Suat Erturk**, Solutions of non-linear oscillators by the modified differential transform method, *Computers & Mathematics with Applications*, Vol. **55**, (2008) 833-842. **ISI (IF: 2.811)**, [**Scopus: Q1**].
80. **Omar Abdulaziz, Ishak Hashim and Shaher Momani**, Application of homotopy-perturbation method to fractional IVPs, *Journal of Computational and Applied Mathematics*, Vol. **216**, (2008) 574-584. **ISI (IF: 1.883)**, [**Scopus: Q1**].
81. **Omar Abdulaziz, Ishak Hashim and Shaher Momani**, Solving systems of fractional differential equations by homotopy-perturbation method. *Physics Letters A*, Vol. **372**, (2008) 541-549. **ISI (IF: 1.772)**. **ISI (IF: 2.087)**, [**Scopus: Q2**].
82. **Zaid Odibat, Shaher Momani and Vedat Suat Erturk**, Generalized differential transform method: Application to differential equations of fractional order, *Applied Mathematics and Computation*, Vol. **197**, (2008) 467-477. **ISI (IF:3.092)**, [**Scopus: Q1***].
83. **Omar Jaradat, Ahmad Al-Omari and Shaher Momani**, Existence of the mild solution for fractional semilinear initial value problems, *Nonlinear Analysis Journal: Theory, Methods & Applications*, Vol. **69**, (2008) 3153-3159. **ISI (IF: 1.450)**, [**Scopus: Q1**].
84. **Shaher Momani, Ziad Odibat and Ahmed Alawneh**, Variational iteration method for solving the space- and time-fractional KdV equation, *Numerical Methods for Partial Differential Equations Journal*, Vol. **24**(1), (2008) 262-271. **ISI (IF: 1.633)**, [**Scopus: Q1**].
85. **Shaher Momani and Vedat Suat Erturk**, A numerical scheme for the solution of viscous Cahn-Hilliard equation, *Numerical Methods for Partial Differential Equations Journal*, Vol. **24**(2), (2008) 663-669. **ISI (IF: 1.633)**, [**Scopus: Q1**].
86. **Shaher Momani and Ziad Odibat**, Numerical solutions of the space-time fractional advection-dispersion equation, *Numerical Methods for Partial Differential Equations Journal*, Vol. **24**, (2008) 1416-1429. **ISI (IF: 1.633)**, [**Scopus: Q1**].
87. **Zaid Odibat and Shaher Momani**, Analytical comparison between the homotopy perturbation method and variational iteration method for differential equations of fractional order, *International Journal of Modern Physics B*, Vol. **22**, (2008) 4041-4058. **ISI (IF: 0.863)**, [**Scopus: Q3**].

88. **Shaher Momani and Vedat Suat Erturk**, Solving a system of fourth-order obstacle boundary value problems by differential transform method, *Kybernetes*, Vol. **73**(2), (2008) 315-325. **ISI (IF: 1.381)**, [**SJR: Q2**].
89. **M. S. Chowdhury, Ishak Hashim and Shaher Momani**, The multistage homotopy-perturbation method: A powerful scheme for handling the Lorenz system, *Chaos, Solitons & Fractals*, Vol. **40**, (2009) 1929-1937. **ISI (IF: 3.064)**, [**Scopus: Q1***].
90. **Ishak Hashim, Omar Abdulaziz and Shaher Momani**, Homotopy analysis method for fractional IVPs, *Communications in Nonlinear Science and Numerical Simulation*, Vol. **14**, (2009) 674-784. **ISI (IF: 3.967)**, [**Scopus: Q1***].
91. **Shaher Momani, Omar Jaradat and Rabha Ibrahim**, Numerical approximations of a dynamic system containing fractional derivatives. *Journal of Applied Sciences*, Vol. **8**(6), (2008) 1079-1084. [**Scopus: Q4**].
92. **Shaher Momani and Hossein Jafari**, Numerical study of systems of fractional differential equations by the decomposition method. *Southeast Asian Bulletin of Mathematics*, Vol. **32**, (2008) 721-730.
93. **S. M. Momani, Ahlam Jameel and Sora Al-Azwai**, Local and global uniqueness theorems on fractional integro-differential equations via Gronwall's and Bihari's inequalities. *Soochow Journal of Mathematics*, Vol. **33**(4), (2007) 619-627.
94. **Vedat Suat Erturk and Shaher Momani**, Differential transform technique for solving fifth-order boundary value problems, *Mathematical and Computational Applications*, Vol. **13**(2), (2008) 113-121. [**Scopus: Q3**].
95. **Zaid Odibat and Shaher Momani**, An algorithm for the numerical solution of differential equations of fractional order, *Journal of Applied Mathematics and Informatics*, Vol. **26**, (2008) 15-27.
96. **Shaher Momani**, Numerical simulations for the space- and time-fractional partial differential equations, *Proceedings of The Third Conferences On Research And Education In Mathematics, Malaysia*, (2007) 51-56.
97. **Vedat Suat Erturk and Shaher Momani**, Differential transform method for obtaining positive solutions for two-point nonlinear boundary value problems, *International Journal: mathematical Manuscripts (IJMM)*, Vol. **1**(1), (2007) 65-72.
98. **Shaher Momani, Ziad Odibat and Ishak Hashim**, Algorithms for nonlinear fractional partial differential equations: A selection of numerical methods, *Topological Methods in Nonlinear Analysis Journal*, Vol. **31**, (2008) 211-226. **ISI (IF: 0.837)**, [**Scopus: Q2**].
99. **Zaid Odibat, Shaher Momani and Ahmed Alawneh**, Analytic study on time-fractional Schrödinger equations: Exact solutions by GDTM, *Journal of Physics: Conference Series*, Vol. **96**, (2008) 012066. [**Scopus: Q4**].
100. **Zaid Odibat, Shaher Momani**, Applications of variational iteration and homotopy perturbation methods to fractional evolution equations, *Topological Methods in Nonlinear Analysis Journal*, Vol. **31**, (2008) 227-234. **ISI (IF: 0.837)**, [**Scopus: Q2**].
101. **Shaher Momani**, An efficient numerical scheme for solving fractional convection-diffusion problems, *International Journal of Computational and Numerical Analysis and Applications*, accepted (2007).

102. **Ziad Odibat, Shaher Momani and Ahmed Alawneh**, Approximate analytical solution of the space- and time- fractional Burgers equations, *Journal Européen des Systèmes Automatisés*, Vol. **42**(6), (2008) 627-638. [Scopus: Q3].
103. **Shaher Momani and Rabha Ibrahim**, Analytical solutions of a fractional oscillator by the decomposition method, *International Journal of Pure and Applied Mathematics*, Vol. **37**(1), (2007) 119-132. [Scopus: Q4].
104. **M. H. Alnasr and Shaher Momani**, Application of homotopy perturbation method to singularly perturbed Volterra integral equations. *Journal of Applied Sciences*, Vol. **8**(6), (2008) 1073-1078. [SJ: Q4].
105. **Ziad Odibat and Shaher Momani**, Fractional Green's Function for a Class of Fractional Partial Differential Equations. *Journal Européen des Systèmes Automatisés*, Vol. **42**(6), (2008) 639-652. [Scopus: Q3].
106. **Shaher Momani, Vedat Suat Erturk and Sana Abu-Qurra**, An approximation of the analytic solution of the Helmholtz equation. *Studies in Nonlinear Sciences*, Vol. **1**, (2010) 37-40.
107. **Vedat Suat Erturk and Shaher Momani**, Numerical solutions of two forms of Blasius equation on a half-infinite domain. *Journal of Algorithms and Computational Technology*, Vol. **2**(3), (2008). [Scopus: Q4].
108. **Rabha Ibrahim and Shaher Momani**, Upper and lower bounds of solutions for fractional integral equations. *Surveys in Mathematics and its Applications*, Vol. **24**, (2007) 145-156.
109. **Shaher Momani, G. H. Erjaee and M. H. Alnasr**, The modified homotopy perturbation method for handling non-linear oscillators. *Computers and Mathematics with Applications*, Vol. **58**, (2009) 2209-2220. ISI (IF: 2.811), [Scopus: Q1].
110. **Zaid Odibat and Shaher Momani**, The variational iteration method: An efficient scheme for handling fractional partial differential equations in fluid mechanics. *Computers and Mathematics with Applications*, Vol. **58**, (2009) 2199-2208. ISI (IF: 2.811), [Scopus: Q1].
111. **Shaher Momani and Muhammad Aslam Noor**, Some numerical methods for solving special third-order initial-boundary value problems, *Nonlinear Analysis Forum*, Vol. **13**, (2008) 109-117.
112. **Shaher Momani, Muhammad Aslam Noor and Syed Tauseef Mohyud-Din**, Numerical methods for solving a special sixth-order boundary value problem, *Nonlinear Analysis Forum*, Vol. **13**, (2008) 124-135.
113. **S.H. Hoseinnia, A. Ranjbar and Shaher Momani**, Using enhanced homotopy perturbation method in fractional differential equation via deforming the linear part, *Computers and Mathematics with Applications*, Vol. **56**, (2008) 3138-3149. ISI (IF: 2.811), [Scopus: Q1].
114. **S. H. Hosseinnia, R. Ghaderi, A. Ranjbar N., M. Mahmoudian and Shaher Momani**, Sliding mode synchronization of an uncertain fractional order chaotic system, *Computers and Mathematics with Applications*, Vol. **59**, (2010) 1637-1643. ISI (IF: 2.811), [Scopus: Q1].
115. **E. Naseri, R. Ghaderi, A. Ranjbar, J. Sadati, M. Mahmoudian, S. H. Hosseinnia and Shaher Momani**, Solving linear fractional-order differential equations via the enhanced homotopy perturbation method, *Physica Scripta*, Vol. **2009**, (2009) 013034. ISI (IF: 2.151), [Scopus: Q2].

116. **M. Zolfaghari, R. Ghaderi, A. Sheikholeslami, A. Ranjbar, S. H. Hosseinnia and Shaher Momani and J Sadati**, Application of the enhanced homotopy perturbation method to solve the fractional-order Bagley–Torvik differential equation, *Physica Scripta*, Vol. **2009**, (2009) 013032. **ISI (IF: 2,151)**, [**Scopus: Q2**].
117. **Rabha W. Ibrahim, Maslina Darus and Shaher Momani**, Subordination and superordination for certain analytic functions containing fractional integral. *Surveys in Mathematics and its Applications*, Vol. **4**, (2009) 111-117.
118. **M. Shahiri, R. Ghaderi, A. Ranjbar N., S.H. Hosseinnia and Shaher Momani**, Chaotic fractional-order Coullet system: Synchronization and control approach, *Communications in Nonlinear Sciences and Numerical Simulation*, Vol. **15**, (2010) 665-674. **ISI (IF: 3.967)**, [**Scopus: Q1***].
119. **H. Delavari, R. Ghaderi, A. Ranjbar, and Shaher Momani**, Fuzzy fractional order sliding mode controller for nonlinear systems, *Communications in Nonlinear Sciences and Numerical Simulation*, Vol. **15**, (2010) 963-978. **ISI (IF: 3.967)**, [**Scopus: Q1***].
120. **Mohammad Zurigat, Shaher Momani and Ahmad Alawneh**, Homotopy analysis method for systems of fractional integro-differential equations, *Proceedings of The Fourth International Workshop on Advanced Computation for Engineering Applications, Jordan*, (2008) 106-111.
121. **S. J. Sadati, A. Ranjbar N., S.H. Hoseinnia, R. Ghaderi, Shaher Momani**, Bifurcation analysis, parameter identification and synchronization of fractional order Newton-Leipnik system using adaptive control, *Proceedings of The International Workshop on New Trends in Science and Technology*, Turkey, 2008.
122. **E. Naseri, R. Ghaderi, A. Ranjbar N., S.H. Hosseinnia, M. Mahmoudian and Shaher Momani**, Bifurcation Analysis and Sliding Mode Control of Ziegler's Pendulum. *Proceedings of The International Workshop on New Trends in Science and Technology*, Turkey, 2008.
123. **H. Delavari, R. Ghaderi, A. Ranjbar N. and Shaher Momani**, Fractional Order Controller for Two-degree of Freedom Polar Robot. *Proceedings of The International Workshop on New Trends in Science and Technology*, Turkey, 2008.
124. **H. Delavari, R. Ghaderi, A. Ranjbar N. and Shaher Momani**, Fractional Order Controller Strategy for Nonlinear Dynamic Systems. *Proceedings of The International Workshop on New Trends in Science and Technology*, Turkey, 2008.
125. **M. Shahiri, A. Ranjbar N., S.H. Hosseinnia, R. Ghaderi and Shaher Momani**, Projective Synchronization of Oscillation and Chaos in Fractional-Order Anti-Controlled Rigid Body System. *Proceedings of The International Workshop on New Trends in Science and Technology*, Turkey, 2008.
126. **Shaher Momani, Banan Ma'ay'ah**, Non-standard discretization for nonlinear systems of fractional differential equations. *Proceedings of The Third IFAC Workshop on Fractional Differentiation and its Applications*, Turkey, 2008.
127. **S.H. Hoseinnia, A. Ranjbar N., R. Ghaderi, Shaher Momani**, Synchronization of uncertain fractional order Duffing-Holmes chaotic system via sliding mode control. *Proceedings of The Third IFAC Workshop on Fractional Differentiation and its Applications*, Turkey, 2008.
128. **G. H. Erjaee and Shaher Momani**, Non-Standard Discretization of Fractional Differential Equations. *proceeding of 8th seminar of differential equations and dynamical systems in*, Isfahan, Iran, 2008.

129. M. Mahmoudian, R. Ghaderi, A. Ranjbar N. , J. Sadati, S.H. Hosseinnia and **Shaher Momani**, Synchronization of fractional-order chaotic system via adaptive PID controller. *New Trends in Nanotechnology and Fractional Calculus Applications*, Springer, (2010) 445-452. **(Chapter in the Book)**.
130. H. Delavari, R. Ghaderi, A. N. Ranjbar and **Shaher Momani**, Synchronization of chaotic nonlinear Gyros using fractional order controller. *New Trends in Nanotechnology and Fractional Calculus Applications*, Springer, (2010) 479-486. **(Chapter in the Book)**.
131. S.H. Hosseinnia, R. Ghaderi, A. N. Ranjbar, J. Sadati and **Shaher Momani**, Synchronization of Gyro systems via fractional-order adaptive controller. *New Trends in Nanotechnology and Fractional Calculus Applications*, Springer, (2010) 495-502. **(Chapter in the Book)**.
132. S.H. Hosseinnia, R. Ghaderi, A. N. Ranjbar, F. Abdous and **Shaher Momani**, Control of chaos via fractional-order state feedback controller. *New Trends in Nanotechnology and Fractional Calculus Applications*, Springer, (2010) 511-519. **(Chapter in the Book)**.
133. **Shaher Momani**, Ahmet Yildirim, Analytical approximate solutions of the fractional convection-diffusion equation with nonlinear source term by He's homotopy perturbation method. *International Journal of Computer Mathematics*, Vol. **87**, (2010) 1057-1065. ISI (IF: 1.196), [Scopus: Q2].
134. Ahmet Yildirim, **Shaher Momani**, Series solutions of a fractional oscillator by means of the homotopy perturbation method. *International Journal of Computer Mathematics*, Vol. **87**, (2010) 1072-1082. ISI (IF: 1.196), [Scopus: Q2].
135. Mohammad Zurigat, **Shaher Momani**, Zaid Odibat and Ahmad Alawneh, The homotopy analysis method for handling systems of fractional differential equations, *Applied Mathematical Modelling*, Vol. **34**, (2010) 24-35. ISI (IF: 2.841), [Scopus: Q1*].
136. Mohammad Zurigat, **Shaher Momani** and Ahmad Alawneh, Homotopy analysis method for systems of fractional integro-differential equations, *The International Journal on Neural, Parallel and Scientific Computation (NPSC)*, Vol. **17**, (2009) 169-186. [Scopus: Q4].
137. Zaid Odibat, **Shaher Momani** and Hang Xu, A reliable algorithm of homotopy analysis method for solving nonlinear fractional differential equations, *Applied Mathematical Modelling*, Vol. **34**, (2010) 593-600. ISI (IF: 2.841), [Scopus: Q1*].
138. Adel Al-rabtah, Vedat Suat Erturk and **Shaher Momani**, Solutions of a fractional oscillator by using differential transform method, *Computers & Mathematics with Applications*, Vol. **59**, (2010) 1356-1362. ISI (IF: 2.811), [Scopus: Q1].
139. H. Delavari, A. Ranjbar N, R. Ghaderi, **Shaher Momani**, Fractional order control of a coupled tank. *Nonlinear Dynamics*, Vol. **61**, (2010) 383-397. ISI (IF: 4.604), [Scopus: Q1*].
140. Mohammad Zurigat, **Shaher Momani** and Ahmad Alawneh, Analytical approximate solutions of systems of fractional algebraic-differential equations by homotopy analysis method, *Computers & Mathematics with Applications*, Vol. **59**, (2010) 12227-1235. ISI (IF: 2.811), [Scopus: Q1*].
141. Omar Abdulaziz, M.S.H. Chowdhury, Ishak Hashim, and **Shaher Momani**, Direct solutions of second-order BVPs by homotopy-perturbation method, *Sains Malaysiana*, Vol. **38**, (2009) 717-721. ISI (IF: 0.540), [Scopus: Q2].

142. **Asghar Ghorbani and Shaher Momani**, An effective variational iteration algorithm for solving Riccati differential equations. *Applied Mathematics Letters*, Vol. **23**, (2010) 922-927. **ISI (IF: 3.487)**, [**Scopus: Q1***].
143. **Fawang Liu, Mark M. Meerschaert, Shaher Momani, Nikolai N. Leonenko, Wen Chen, and Om P. Agrawal**, Fractional differential equations. *International Journal of Differential Equations*, Vol. **2010**, (2010) 1-2. [**Scopus: Q3**].
144. **E. Naseri, A. Ranjbar, S.H. Hosseinnia and Shaher Momani**, Backstepping Control of Fractional-Order Cheotic Systems. *The 3rd International Conference on Complex Systems and Applications*, France, 2009.
145. **M. Mahmoudian, A. Ranjbar, E. Naseri, S.H. Hosseinnia and Shaher Momani**, Control of Genesio-Tesi and Chen Chaotic Systems Using a Fractional-Order Controller. *The 3rd International Conference on Complex Systems and Applications*, France, 2009.
146. **M. shahiri T., A. Ranjbar, R. Ghaderi, S.H. Hosseinnia and Shaher Momani**, Synchronization of Chaotic Fractional-Order Coulet System via ASMC. *The 3rd International Conference on Complex Systems and Applications*, France, 2009.
147. **H. Delavari, R. Ghaderi, A. Ranjbar N. and Shaher Momani**, A Study on the Stability of Fractional Order Systems. *Proceedings of The Fourth IFAC Workshop on Fractional Differentiation and its Applications*, Spain, 2010.
148. **H. Delavari, R. Ghaderi, A. Ranjbar N., S.H. HosseinNia and Shaher Momani**, Adaptive Fractional PID Controller for Robot Manipulator. *Proceedings of The Fourth IFAC Workshop on Fractional Differentiation and its Applications*, Spain, 2010.
149. **M. shahiri T., A. Ranjbar, R. Ghaderi, M. Karami and Shaher Momani**, An optimized projective synchronization based on a smc for chaotic fractional-order Coulet system, *Journal of Nonlinear Systems and Application*, Vol. **1**(3-4), (2010) 122-134.
150. **E. G. Razmjou, A. Ranjbar, Z. Rahmani, R. Ghaderi and Shaher Momani**, Stabilization of Fractional Order Unified Chaotic Systems via Linear State Feedback Controller, *Fractional Dynamics and Control*, Springer, (2011), 85-94. (**Chapter in the Book**). [**Scopus: Q4**].
151. **Nurettin DOGAN, Marwan Al-Quran, Vedat Suat Erturk and Shaher Momani**, Variational Iteration Method For Solving Singularly Perturbed Two-Point Boundary Value Problems. *International Journal of Pure and Appl. Math.*, Vol. **58**(1), (2010). [**Scopus: Q4**].
152. **K. Moaddy, Shaher Momani and I. Hashim**, The Non-standard Finite Difference Scheme for Linear Fractional PDEs in Fluid Mechanics, *Computers & Mathematics with Applications*, Vol. **61**(1) (2011) 1209–1216. **ISI (IF: 2.811)**, [**Scopus: Q1**].
153. **Sana Abu Gurrah, Vedat Suat Erturk and Shaher Momani**, Application of modified differential transform method to fractional oscillators, *Kybernetes Journal*, Vol. **40** (2011) 751-761. **ISI (IF: 1.381)**, [**Scopus: Q2**].
154. **Shaher Momani and Vedat Suat Erturk**, The solution of Flierl-Petviashvili equation and its variants using DTM-Pade technique, *World Applied Sciences Journal*, Vol. **9**, (2010) 32-38. [**Scopus: Q3**].
155. **Vedat Suat Erturk and Shaher Momani**, On the Generalized Differential Transform Method: Application to Fractional Integro-Differential Equations, *Studies in Nonlinear Sciences*, Vol. **1**(3) (2010) 118-126.

156. **K. Moaddy, I. Hashim, and Shaher Momani**, Non-standard finite difference schemes for solving fractional-order Rössler chaotic and hyperchaotic systems, *Computers & Mathematics with Applications*, **62**, (2011) 1068-1074. **ISI (IF: 2.811)**, [**Scopus: Q1**].
157. **Syed Abbas, Malay Banerjee, and Shaher Momani**, Dynamical Analysis of a Fractional-order Modified Logistic Model, *Computers & Mathematics with Applications*, **62**, (2011) 1098-1104. **ISI (IF: 2.811)**, [**Scopus: Q1**].
158. **Nurettin DOGAN, Vedat Suat Erturk, Shaher Momani, Omer Akin and Ahmet Yildirim**, Differential Transform Method For Solving Singularly Perturbed Volterra Integral Equations, *Journal of King Saud University*, Vol. **23** (2011) 223–228. [**Scopus: Q1**].
159. **Vedat Suat Erturk, Zaid Odibat and Shaher Momani**, An approximate solution of a fractional order differential equation model of human T-cell lymphotropic virus I (HTLV-I) infection of CD4+ T-cells, *Computers & Mathematics with Applications*, **62**, (2011) 992-1002. **ISI (IF: 2.811)**, [**Scopus: Q1**].
160. **Hossein Jafari, S. A. Yousefi, Shaher Momani and M. A. Firoozjaee**, Application of Legendre wavelets for solving fractional differential equations, *Computers & Mathematics with Applications*, **62**, (2011) 1038-1045. **ISI (IF: 2.811)**, [**Scopus: Q1**].
161. **A. G. Radwan, K. Moaddy, and Shaher Momani**, Stability and Nonstandard Finite Difference Method of the generalized Chua's circuit, *Computers & Mathematics with Applications*, Vol. **62**, (2011) 961-970. **ISI (IF: 2.811)**, [**Scopus: Q1**].
162. **M.S.H. Chowdhury, I. Hashim, A.F. Ismail, M.M. Rahman and Shaher Momani**, Exact Solution for Linear and Nonlinear Systems of PDEs by Homotopy-Perturbation Method, *Australian Journal of Basic and Applied Sciences*, Vol. **5(12)** (2011) 3295-3305. **ISI (IF: 0.230)**, [**Scopus: Q4**].
163. **K. Moaddy, Ishak Hashim, A. K. Alomari and Shaher Momani**, A new hybrid non-standard finite difference-Adomian Scheme for solution of nonlinear equations, *Sains Malaysiana*, Vol. **40**, (2011) 515-619. **ISI (IF: 0.540)**, [**Scopus: Q2**].
164. **Shaher Momani, Abdullah Abu Rqayiq and Dumitru Baleanu**, A Non-Standard Finite Difference Scheme for Two-Sided Space-Fractional Partial Differential Equations. *International Journal of Bifurcation and Chaos*, Vol. **22(4)** (2012) 1250079-5. **ISI (IF: 2.145)**, [**Scopus: Q1**].
165. **H. Delavari, R. Ghaderi, A. Ranjbar, and Shaher Momani**, "Replay to "Comments on "Fuzzy fractional order sliding mode controller for nonlinear systems, Commun Nonlinear Sci Numer Simulat 15 (2010) 963-978" "" *Communications in Nonlinear Sciences and Numerical Simulation*, Vol. **17**, (2012) 4010-4014. **ISI (IF: 3.967)**, [**Scopus: Q1***].
166. **Muhammad Aslam Noor, Syed Tauseef Mohyud-Din, Ahmet Yildirim and Shaher Momani**, Nonlinear Problems: Analytical and Computational Approach with Applications, *Abstract and Applied Analysis*, accepted. **ISI (IF: 1.102)**, [**Scopus: Q3**].
167. **Adel Al-rabtah, Shaher Momani, and M. Ramadan**, Solving Linear and Nonlinear Fractional Differential Equations Using Spline Functions, *Abstract and Applied Analysis*, Vol. **2012**, (2012) 1-9. **ISI (IF: 1.102)**, [**Scopus: Q3**].
168. **J. M. Jawdat, I. Hashim, and Shaher Momani**, Dynamical system analysis of thermal convection in a horizontal layer nanofluids heated from below, *Mathematical Problems in Engineering*, Vol. **2012**, (2012) 1-13. **ISI (IF: 1.179)**, [**Scopus: Q1**].

169. **M.S.H. Chowdhury** , **Ishak Hashim**, and **Shaher Momani** **M. M. Rahaman**, Application of multistage homotopy perturbation method to the chaotic Genesio system, *Abstract and Applied Analysis*, Vol. **2012**, (2012) 1-10. **ISI (IF: 1.102)**, [**Scopus: Q3**].
170. **Asad Freihat**, **Shaher Momani**, Adaptation of differential transform method for the numeric-analytic solution of fractional-order Rossler chaotic and hyperchaotic systems, *Abstract and Applied Analysis*, Vol. **2012**, (2012) 1-13. **ISI (IF: 1.102)**, [**Scopus: Q3**].
171. **Vedat Suat Erturk**, **Gul Zaman Shaher Momani**, A numeric-analytic method for approximating a giving up smoking model containing fractional derivatives, *Computers & Mathematics with Applications*, Vol. **64 (10)**, (2012) 3065-3074. **ISI (IF: 2.811)**, [**Scopus: Q1**].
172. **Vedat Suat Erturk**, **Zaid Odibat** and **Shaher Momani**, Application of multi-step differential transform method for the analytical and numerical solutions of the density dependent Nagumo telegraph equation, *Romanian Journal of Physics*, Vol. **57 (7-8)**, (2012) 1065-1078. **ISI (IF: 1.433)**, [**Scopus: Q2**].
173. **Ahmad El-Ajou**, **Omar Abu Arqub**, **Shaher Momani**, Homotopy analysis method for second-order boundary value problems of integro-differential equations, *Discrete Dynamics in Nature and Society*, Vol. **2012**, (2012) 1-18. **ISI (IF: 0.973)**, [**Scopus: Q3**].
174. **Omar Abu Arqub**, **Mohammed Al-Smadi**, **Shaher Momani**, Application of reproducing kernel method for solving nonlinear Fredholm-Volterra integro-differential equations, *Abstract and Applied Analysis*, Vol. **2012**, (2012) 1-16. **ISI (IF: 1.102)**, [**Scopus: Q3**].
175. **Vedat Suat Erturk**, **Zaid Odibat** and **Shaher Momani**, The multi-step differential transform method and its application to determine the solutions of non-linear oscillators. *Advances in Applied Mathematics and Mechanics (AAMM)*, Vol. **4**, (2012) 422-438. **ISI (IF: 0.844)**, [**Scopus: Q3**].
176. **Fawang Liu**, **Om P. Agrawal**, **Shaher Momani**, **Nikolai N. Leonenko**, and **Wen Chen**, Fractional differential equations 2011, *International Journal of Differential Equations*, Vol. **2013**, (2011) 1-2. (Scopus), [**Scopus: Q3**].
177. **A. G. Radwan**, **K. Moaddy**, **K.N. Salama**, **Shaher Momani** and **I. Hashim**, The fractional-order modeling and synchronization of electrically coupled neurons system, *Computers & Mathematics with Applications*, Vol. **64 (10)**, (2012) 3329-3339. **ISI (IF: 2.811)**, [**Scopus: Q1**].
178. **Vedat Suat Erturk**, **Ahmet Yildirim**, **Shaher Momani** and **Yasir Khan**, The differential transform method and Padé approximants for a fractional population growth model. *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. **22(6)**, (2012) 791-802. **ISI (IF: 1.958)**, [**Scopus: Q2**].
179. **Mohammad Zurigat**, **Shaher Momani**, and **Ahmad Alawneh**, Solving nonlinear oscillators using a modified homotopy analysis method, *Studia Universitatis Babes-Bolyai Mathematica*, Vol. **57(4)**, (2012) 579-588. [**Scopus: Q4**].
180. **Omar Abu Arqub**, **Zaer Abo-Hammour**, **Shaher Momani**, **Nabil Shawagfeh**, Solving singular two-point boundary value problems using continuous genetic algorithm, *Abstract and Applied Analysis*, Vol. **20112**, (2012) 1-25. **ISI (IF: 1.102)**, [**SJR: Q3**].
181. **Asad Freihat**, **Shaher Momani**, Application of multi-step generalized differential transform method for the solutions of the fractional-order Chua's system, *Journal of Discrete Dynamics in Nature and Society*, Vol. **2012**, (2012) 1-12. **ISI (IF: 0.973)**, [**Scopus: Q3**].

182. Samia Bushnaq, Shaher Momani, Yong Zhou , A reproducing kernel Hilbert space method for solving integro-differential equations of fractional order, *Journal of Optimization Theory and Applications*, Vol. **165**(1), (2013) 96-105. ISI (IF: 1.600), [Scopus: Q1].
183. Anwar Zeb, Gul Zaman, Shaher Momani, Square-root Dynamics of a Giving Up Smoking Model, *Applied Mathematical Modelling*, Vol. **37**(7), (2013) 5326-5334. ISI (IF: 2.841), [Scopus: Q1*].
184. A. Golbabai, Shaher Momani, M. Fardi and K. Sayevand, On systems of nonlinear equations: some iterative methods with accelerated fourth- and fifth-order convergence, *International Journal of Computer Mathematics*, revised.
185. Mohammad Zurigat, Shaher Momani, Ahmad Alawneh, The multistage homotopy analysis method: Application to a biochemical reaction model of fractional order, *International Journal of Computer Mathematics*, Vol. **2013**, (2013) 1-12. ISI (IF: 1.196), [Scopus: Q2].
186. Omar Abu Arqub, Ahmad El-Ajou, Shaher Momani, Analytical solutions of fuzzy initial value problems by HAM, *Applied Mathematics & Information Sciences*, Vol. **7**(5), (2013) 1903-1919. ISI (IF: 1.232), [Scopus: Q3].
187. Anwar Zeb, Gul Zaman, M.I. Chohan, Shaher Momani, Vedat S ERTURK, Analytic numeric solution for SIRC epidemic model in fractional order, *Asian Journal of Mathematics and Applications*, Vol. **2013**, (2013).
188. Omar Abu Arqub, Zaer Abo-Hammour, Shaher Momani, Application of continuous genetic algorithm for nonlinear system of second-order boundary value problems, *Applied Mathematics & Information Sciences*, Vol. **8**(1), (2014) 253-248. ISI (IF: 1.232), [Scopus: Q3].
189. Mohammed Al-Smadi, Omar Abu Arqub, Shaher Momani, A computational method for two-point boundary value problems of fourth-order Fredholm-Volterra integro-differential equations, *Mathematical Problems in Engineering*, Vol. **2013**, (2012) 1-10. ISI (IF: 1.179), [Scopus: Q1].
190. A. G. Radwan, K. Moaddy, Shaher Momani and I. Hashim, Control and switching synchronization of fractional order chaotic systems using active control technique, *Journal of Advanced Research*, Vol. **5**, (2014) 125-132. ISI (IF: 4.327), [Scopus: Q1*].
191. Ahmad El-Ajou, Zaid Odibat², Shaher Momani and Ahmad Alawneh, Construction of Analytical Solutions to Fractional Differential Equations Using Homotopy Analysis Method, *IAENG International Journal of Applied Mathematics*, Vol. **40**(2) (2010). ISI (IF: 1.08), [Scopus: Q3].
192. Vedat Suat Erturk and Shaher Momani, Solutions to the problem of prey and predator and the epidemic model via differential transform method, *Kybernetes*, Vol. **37**(8) (2008) 1180-1188. ISI (IF: 1.381), [Scopus: Q2].
193. Nurettin DOGAN, Vedat Suat Erturk and Shaher Momani, He's Variational Iteration Method for Solving the Singularly Perturbed Volterra Integral Equations, *World Applied Sciences Journal*, Vol. **22**(11) (2013) 1657-1661. [Scopus: Q3].
194. Mohammad Zurigat, Safwan Al-Shara Shaher Momani, and Ahmad Alawneh, The multi-step homotopy analysis method: A powerful scheme for handling non-linear oscillators, *Iranian Journal of Science and Technology*, Vol. **37A3** (2013) 421-429. ISI (IF: 0.692), [Scopus: Q3].

195. **Eman Abuteen, Shaher Momani and Ahmad Alawneh**, Solving the fractional nonlinear Bloch system using multi-step generalized differential transform method, *Computers & Mathematics with Applications*, Vol. 68 (2014) 2124-2132. **ISI (IF: 2.811)**, [**Scopus: Q1**].
196. **Anwar Zeb, Gul Zaman, Shaher Momani, and Vedat Suat Erturk**, Solution of an seir epidemic model in fractional order, *VFAST Transactions on Applied Mathematics*, Vol. 1 (2013) 7-15.
197. **Abdelhalim Ebaid, Shaher Momani and Shih-Hsiang Chang**, On the periodic solutions of the nonlinear oscillators: $\ddot{x} + f(x, x(t), |x(t)|) = 0$, *Journal of Vibroengineering*, Vol. 15 (2013) 1701-1714. **ISI (IF: 0.590)**, [**Scopus: Q3**].
198. **Za'er S. Abo-Hammour, Othman MK. Alsmadi, Shaher Momani, Omar Abu Arqub**, A genetic algorithm approach for prediction of linear dynamical systems, *Mathematical Problems in Engineering*, Vol. 2013 (2013) 1-12. **ISI (IF: 1.179)**, [**Scopus: Q1**].
199. **Za'er Abo-Hammour, Omar Abu Arqub, Othman Alsmadi, Shaher Momani**, An Optimization Algorithm for Solving Systems of Singular Boundary Value Problems, *Applied Mathematics & Information Sciences*, Vol. 8 (2014) 2809-2821. **ISI (IF: 1.232)**, [**Scopus: Q3**].
200. **Omar Abu Arqub, Zaer Abo-Hammour, Ramzi Al-badarneh, Shaher Momani**, A reliable analytical method for solving higher-order initial value problems, *Discrete Dynamics in Nature and Society*, Vol. 2013 (2013) 1-12. **ISI (IF: 0.973)**, [**Scopus: Q3**].
201. **Ahmad El-Ajuo, Omar Abu Arqub, Zeyad Al Zhour, Shaher Momani**, New results on fractional power series: theory and applications, *Entropy Journal*, Vol. 15 (2013) 5305-5323. **ISI (IF: 2.419)**, [**Scopus: Q1**].
202. **Nabil Shawagfeh, Omar Abu Arqub, Shaher Momani**, Analytical solution of nonlinear second-order periodic boundary value problem using reproducing kernel method, *Journal of Computational Analysis and Applications*, Vol. 16(4) (2014) 750-762. **ISI (IF: 0.594)**, [**Scopus: Q4**].
203. **Vedat Suat ERTURK, Gul Zaman, Baha Alzalg, Anwar Zeb, Shaher Momani**, Comparing two numerical methods for approximating a new giving up smoking model involving fractional order derivatives, *Iranian Journal of Science and Technology (Sciences)*, Vol. 41(3) (2017) 569-575. **ISI (IF: 0.692)**, [**Scopus: Q3**].
204. **Anwar Zeb, Madad Khan, Gul Zaman Shaher Momani, Vedat Suat ERTÜRK**, Comparison of numerical methods of the SEIR epidemic model of fractional order, *Zeitschrift für Naturforschung A - A Journal of Physical Sciences*, Vol. 69a (2014) 81-89. **ISI (IF: 1.079)**, [**Scopus: Q2**].
205. **Omar Abu Arqub 1, Ahmad El-Ajuo 1, Zeyad Al Zhour, Shaher Momani**, Multiple solutions of nonlinear boundary value problems of fractional order: new analytic iterative technique *Entropy Journal*, Vol. 16 (2014) 471-493. **ISI (IF: 2.419)**, [**Scopus: Q1**].
206. **J. M. Jawdat, I. Hashim, and Shaher Momani**, Inhibition or enhancement of chaotic convection via inclined magnetic field. *Applied Mathematical Modelling Journal*, Vol. 38 (2014) 2996-3002. **ISI (IF: 2.841)**, [**Scopus: Q1***].
207. **Za'er Abo-Hammour, Omar Abu Arqub, Shaher Momani, Nabil Shawagfeh**, Optimization solution of Troesch's and Bratu's problems of ordinary type using novel continuous genetic algorithm, *Discrete Dynamics in Nature and Society*, Vol. 2014 (2014) 1-15. **ISI (IF: 0.973)**, [**Scopus: Q3**].

208. **Samia Bushnaq, Banan Maayaah, Shaher Momani, A. Alsaidi**, A Reproducing Kernel Hilbert Space Method for Solving Systems of Fractional Integro-Differential Equations, *Abstract and Applied Analysis*, Vol. 2014 (2014) 1-6. **ISI (IF: 1.102)**, [**Scopus: Q3**].
209. **Shaher Momani, Omar Abu Arqub, Tasawar Hayat, Hamed Al-Sulami**, A computational method for solving periodic boundary value problems for integro-differential equations of Fredholm-Volterra type, *Applied Mathematics & Computation*, Vol. **240**(2), (2014) 229-239. **ISI (IF:3.092)**, [**Scopus: Q1***].
210. **Syed Abbas, Vedat Suat Erturk and Shaher Momani**, Dynamical analysis of the Irving-Mullineux oscillator equation of fractional order, *Signal Processing*, Vol. 102 (2014) 171-176. **ISI (IF: 4.086)**, [**Scopus: Q1**].
211. **Shaher Momani, Asad Freihat, Mohammed Al-Smadi**, Analytical study of fractional-order multiple chaotic FitzHugh-Nagumo neurons model using multi-step generalized differential transform method, *Abstract and Applied Analysis*, Vol. 2014 (2014) 1-10. **ISI (IF: 1.102)**, [**Scopus: Q3**].
212. **J. M. Jawdat, I. Hashim, Beer S. Bhadauria, and Shaher Momani**, On Onset of Chaotic Convection in Couple-Stress Fluids, *Mathematical Modelling and Analysis Journal*, Vol. 19 (2014) 539-370. **ISI (IF: 1.038)**, [**Scopus: Q2**].
213. **Shaher Momani, Omar Abu Arqub, Ma'mon Abu Hammad, Za'er Abo-Hammour**, A residual power series technique for solving systems of initial value problems, *Applied Mathematics & Information Sciences*, Vol. 10 (2016) 765-775. **ISI (IF: 1.232)**, [**Scopus: Q3**].
214. **Banan Maayaah, Samia Bushnaq, Shaher Momani, Omar Abu Arqub**, "Iterative multi-step reproducing kernel Hilbert space method for solving strongly nonlinear oscillators, *Advances in Mathematical Physics*, Vol. 2014 (2014) 1-7. **ISI (IF: 0.710)**, [**Scopus: Q3**].
215. **Iryna Komashynska, Mohammed Al-Smadi, Omar Abu Arqub, Shaher Momani**, An Efficient Analytical Method for Solving Singular Initial Value Problems of Nonlinear Systems, *Applied Mathematics and Information Sciences*, Vol. 10 (2016) 647-656. **ISI (IF: 1.232)**, [**Scopus: Q3**].
216. **Ahmad El-Ajou, Omar Abu Arqub, Shaher Momani**, Approximate analytical solution of the nonlinear fractional KdV-Burgers equation: a new iterative algorithm, *Journal of Computational Physics*, Vol. 293 (2015) 81-95. **ISI (IF: 2.845)**, [**Scopus: Q1***].
217. **Omar Abu Arqub, Ahmad El-Ajou, Shaher Momani**, Constructing and predicting solitary pattern solutions for nonlinear time-fractional dispersive partial differential equations, *Journal of Computational Physics*, Vol. 293 (2015) 385-399. **ISI (IF: 2.845)**, [**Scopus: Q1***].
218. **Omar Abu Arqub, Shaher Momani, Saleh Almezal, Marwan Kutbi**, A novel iterative numerical algorithm for the solutions of systems of fuzzy initial value problems, *Applied Mathematics and Information Sciences*, Vol. 11 (2017) 1059-1074. **ISI (IF: 1.232)**, [**Scopus: Q3**].
219. **Omar Abu Arqub, Shaher Momani, Saleh Al-Mezel, Marwan Kutbi**, Existence, uniqueness, and characterization theorems for fuzzy integrodifferential equations of Volterra type, *Mathematical Problem in Engineering*, Vol. 2015 (2015) 1-13. **ISI (IF: 1.179)**, [**Scopus: Q1**].
220. **Ahmad El-Ajou, Omar Abu Arqub, Shaher Momani, Dumitru Baleanu, Ahmed Alsaedi**, A novel expansion iterative method for solving linear partial differential equations of fractional order, *Applied Mathematics and Computations*, Vol. 257 (2015) 119-133. **ISI (IF:3.092)**, [**Scopus: Q1***].

221. Omar Abu Arqub, Mohammed AL-Smadi, Shaher Momani, Tasawar Hayat, Ahmed Alsaedi, Numerical Solutions of Fuzzy Differential Equations Using Reproducing Kernel Hilbert Space Method, *Soft Computing*, Vol. 20(8) (2016) 3283-3302. ISI (IF: 2.784), [Scopus: Q1*].
222. H. M. Jaradat, Fadi Awawdeh, Safwan Al-Shara, Marwan Alquran, Shaher Momani, Controllable dynamical behaviors and the analysis of fractal Burgers hierarchy with the full effects of inhomogeneities of media, *Romanian Journal of Physics*, Vol. 60 (2015) 324-343. ISI (IF: 1.460), [Scopus: Q2].
223. Shaher Momani, Za'er S. Abo-Hammour, Othman MK. Alsmadi, Solution of inverse kinematics problem using genetic algorithms, *Applied Mathematics & Information Sciences*, Vol. 10 (2016) 225-235. ISI (IF: 1.232), [Scopus: Q3].
224. Omar Abu Arqub, Shaher Momani, Saleh Al-Mezel, Marwan Kutbi, Ahmed Alsaedi, Existence and uniqueness of fuzzy solution for the nonlinear second-order fuzzy Volterra integrodifferential equations, *Journal of Computational Analysis and Applications*, Vol. 21(2) (2016) 213-217. ISI (IF: 0.590), [Scopus: Q3].
225. Banan Maayah, Samia Bushnaq, Morad Ahmad, Shaher Momani, Computational method for solving nonlinear Fredholm-Integro-Differential equations, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 7802-7806. ISI (IF: 1.666), [Scopus: Q4].
226. Morad Ahmad, Shaher Momani, Omar Abu Arqub, Mohammed AL-Smadi, Ahmed Alsaedi, An efficient computational method for handling singular second-order, three points Volterra integrodifferential equations, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 7807-7815. ISI (IF: 1.666), [Scopus: Q4].
227. Samia Bushnaq, Banan Maayah, Shaher Momani, Omar Abu Arqub, Mohammed AL-Smadi, Ahmed Alsaedi, Analytical simulation of singular second-order, three points BVPs for Fredholm operator using computational kernel algorithm, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 7816-7824. ISI (IF: 1.666), [Scopus: Q4].
228. Mohammed AL-Smadi, Asad Freihat, Ma'mon Abu Hammad Shaher Momani, Analytical approximations of partial differential equations of fractional order with multistep approach, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 7793-7801. ISI (IF: 1.666), [Scopus: Q4].
229. A.F. Jameel, Nidal Anakira, A. K. Alomari, I. Hashim, Shaher Momani, A New Approximation Method for Solving Fuzzy Heat Equations, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 7825-7832. ISI (IF: 1.666), [Scopus: Q4].
230. Ahmad El-Ajou, Omar Abu Arqub, Shaher Momani, Solving fractional two-point boundary value problems using continuous analytic method, *Ain Shams Engineering Journal*, Vol. 4 (2013) 539-547. [Scopus: Q1].
231. Shaher Momani, Omar Abu Arqub, Asad Freihat Mohammed AL-Smadi, Analytical approximations for Fokker-Planck equations of fractional order in multistep schemes, *International Journal of Applied and Computational Mathematics*, Vol. 15(3) (2016) 319-330. ISI (IF: 2.365), [Scopus: Q3].
232. Asia Albzeirat, Muhammad Zaini Ahmad, Shaher Momani, A novel numerical algorithm to solve systems of fuzzy differential equations of fractional and integer order using reproducing Hilbert space method, *Journal of Computational and Theoretical Nanoscience*, Vol. 13(11) (2016) 8789-8799. ISI (IF: 1.666), [Scopus: Q4].

233. **Asia Albzeirat, Muhammad Zaini Ahmad, Shaher Momani, Israr Ahmad**, New implementation of reproducing kernel Hilbert space method for solving a fuzzy integro-differential equation of integer and fractional orders, *Journal of King Saud University-Science*, Vol. 30 (2018) 352-358. [Scopus: Q1].
234. **Asia Albzeirat, Muhammad Zaini Ahmad, Shaher Momani, Banan Maayah**, Numerical solution of second-order fuzzy differential equation of integer and fractional order using reproducing kernel hilbert space method tools, *Far East Journal of Mathematical Sciences*, Vol. 101(6) (2016) 1327-1329. [Scopus: Q3].
235. **Asia Albzeirat, Muhammad Zaini Ahmad, Shaher Momani**, Approximate solutions of fuzzy differential equations of fractional order using modified reproducing kernel Hilbert space method, *Journal of Nonlinear sciences and Applications*, Vol. 10(11) (2017) 2423-2439. ISI (IF: 1.176), [Scopus: Q3].
236. **Shatha Hasan, Mohammad Almomani, Ahmad Alawneh, Shaher Momani**, Second Order Fuzzy Fractional Differential Equations Under Caputo's H-Differentiability, *Applied Mathematics & Information Sciences*, Vol. 11(6) (2017) 1-12. ISI (IF: 1.232), [Scopus: Q3].
237. **Mohammed Al-Smadi, Asad Freihat, Hammad Khalil, Shaher Momani, Rahmat Ali Khan**, Numerical Multistep Approach for Solving Fractional Partial Differential Equations, *International Journal of Computational Methods*, Vol. 14(3) (2017) 1750029-15. ISI (IF: 1.221), [Scopus: Q2].
238. **Omar Abu Arqub, Mohammed AL-Smadi, Shaher Momani, Tasawar Hayat, Ahmed Alsaedi**, Application of reproducing kernel algorithm for solving second-order, two-point fuzzy boundary value problems, *Soft Computing*, Vol. 21(23) (2017) 7191-7206. ISI (IF: 2.784), [Scopus: Q1*].
239. **Zaina Momani, Mohammad Al Shridah, Omar Abu Arqub, Mohammad Al-Momani, Shaher Momani**, Modeling and Analyzing Neural Networks Using Reproducing Kernel Hilbert Space Algorithm, *Applied Mathematics & Information Sciences*, Vol. 12(1) (2018) 88-99. ISI (IF: 1.232), [Scopus: Q3].
240. **Asia Albzeirat, Muhammad Zaini Ahmad, Shaher Momani, Israr Ahmad, r Fathilah Mohammad Alipiah**, Generalizing the Meaning of Derivatives and Integrals of any Order Differential Equations by Fuzzy-Order Derivatives and Fuzzy-Order Integrals, *Journal of King Saud University-Science*, Vol. 30 (2018) 352-358. [Scopus: Q1].
241. **Marlo M. Vernon, Andrew Balas, Shaher Momani**, Are university rankings useful to improve research? A systematic review, *PLOS ONE*, Vol. 13(3) (2018) 1-15. ISI (IF: 2.770), [Scopus: Q1*].
242. **J. H. Jaradat, M. Syam, M. Jaradat, Z. Mustafa, Shaher Momani**, New solitary wave and multiple soliton solutions for fifth order nonlinear evolution equation with time variable coefficients, *Results in Physics*, Vol. 8 (2018) 977-980. ISI (IF: 3.280), [Scopus: Q1].
243. **Iqbal M. Batiha, Reyad El-Khazali, Ahmed Alsaedi, Shaher Momani**, The General Solution of Singular Fractional-Order Linear Time-Invariant Continuous Systems with Regular Pencils, *Entropy in Dynamic Systems*, Vol. 20(6) (2018) 1-13. ISI (IF: 2.419), [Scopus: Q1].
244. **Shaher Momani, Omar Abu Arqub, Banan Maayah, Feras Yousef, Ahmed Alsaedi**, A reliable algorithm for solving linear and nonlinear time-fractional Schrödinger equations in one-dimensional space, *International Journal of Applied and Computational Mathematics*, Vol. 17(2) (2018) 151-160. ISI (IF: 3.160), [Scopus: Q3].

245. **Mohammed Al-Smadi, Omar Abu Arqub, and Shaher Momani**, Solutions of Volterra singular time-fractional PIDEs. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.
246. **Mohammad Alaroud, Mohammed Al-Smadi, Omar Abu Arqub, Rokiah Rozita Ahmad, Mamon Abu Hammad, and Shaher Momani**, Numerical solutions of linear time-fractional Klein-Gordon equation by using power series approach. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.
247. **Feras Yousef, Shaher Momani and Rowaa Abdalmohsen**, Analytic solution of spatial-temporal fractional Klein-Gordon equation arising in physical models. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.
248. **Rowaa Abdalmohsen, Imad Jaradat, Marwan Alquran, Shaher Momani**, An assortment of analytical solution schemes for system of FDEs with multi-memory indices. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.
249. **K. Moaddy, A. G. Radwan, K. N. Salama, and Shaher Momani, I. Hashim**, Parametric Control on Fractional-Order Response for L Chaotic System. *Journal of Physics: Conference Series*, Vol. 423 (2013) 012024-10. [Scopus: Q4].
250. **Mohammed Al-Smadi, Omar Abu Arqub, Nabil Shawagfeh and Shaher Momani**, Numerical investigations for systems of second-order periodic boundary value problems using reproducing kernel method, *Applied Mathematics and Computation*, Vol. 291, (2016) 137-148. ISI (IF:3.092), [Scopus: Q1*].
251. **Vedat ERTURK, Kamal Shah, Shaher Momani, Rahmat Ali Khan**, The Existence And Numerical Solution For A Fractional Boundary Value Problem, *Topological Methods in Nonlinear Analysis*, accepted July 20, 2018. ISI (IF: 0.837), [Scopus: Q2].
252. **Imad Jaradat, Marwan Alquran, Shaher Momani, Anjan Biswas**, Dark and singular optical solutions with dual-mode nonlinear Schrodinger's equation and Kerr-law nonlinearity, *journal Optik*, Vol. 172 (2018) 822-825. ISI (IF: 1.914), [Scopus: Q2].
253. **Banan Maayah, Feras Yousef, Omar Abu Arqub, Shaher Momani, Ahmed Alsaedi**, Computing bifurcations behavior of mixed type singular time-fractional partial integrodifferential equations of Dirichlet functions types in Hilbert space with error analysis, *Filomat Journal*, Vol. 33(12) (2019) 38453853. ISI (IF: 0.789), [Scopus: Q2]. AU.
254. **A Zeb, VS Erturk, U Khan, G Zaman, Shaher Momani**, An Approach for Approximate Solution of Fractional Order Smoking Model with Relapse Class, *International Journal of Biomathematics*, Vol. 11(6) (2018) 1850077-27. ISI (IF: 0.894), [Scopus: Q3].
255. **Banan Maayah, Samia Bushnaq, Ahmed Alsaedi Shaher Momani**, An efficient numerical method for solving chaotic and non-chaotic systems, *Journal of the Ramanujan Mathematical Society*, Vol. 33(3) (2018) 219231. ISI (IF: 0.229), [Scopus: Q4].
256. **Saad N. AL- Azzawi, Shaher Momani, Huda Emad AL-Deen Jameel**, Full Details of Solving Initial Value Problems by Reproducing Kernel Hilbert Space Method, *Mathematical Theory and Modeling*, Vol. 5(6) (2015) 1120.
257. **Iqbal M. Batiha, Reyad El-Khazali Shaher Momani**, A Powerful Scheme for Handling the Fractional-Order Lorenz System. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.

258. **Shatha Hasan, Mohammed Al-Smadi, Asad Freihet and Shaher Momani**, Approximate Solutions of Second-Order Obstacle Problem of Fractional-order Using Reproducing Kernel Hilbert Space Method. *Proceedings of The ICFDA18 International Conference on Fractional Differentiation and its Applications*, Jordan, 2018.
259. **H. M. Jaradat, Safwan Al-Shara, M. M. M. Jaradat, Zead Mustafa, O. Alsayyed, Marwan Alquran, Khedr M. Abohassan and Shaher Momani**, New Solitary Wave and Multiple Soliton Solutions for the Time-Space Coupled Fractional mKdV System with Time-Dependent Coefficients. *Journal of Computational and Theoretical Nanoscience*, Vol. 13 (2016) 9082-9089. **ISI (IF: 1.666)**, [**Scopus: Q4**].
260. **Omar Abu Arqub, Shaher Momani**, Numerical solutions of singular time-fractional PDEs, *Handbook of Fractional Calculus with Applications.*, accepted. (**Chapter in the Book**).
261. **Banan Maayah, Samia Bushnaq, Shatha Hasan, Shaher Momani**, Numerical Solution of Fractional Fredholm Integro-Differential Equations Using Fuzzy Transform Method, *International Journal of Pure and Applied Mathematics* , accepted. [**Scopus: Q4**].
262. **Laith Hawawsheh, Ahmad Al-Salman, Shaher Momani**, A Note on Rough Parametric Marcinkiewicz Functions, *Analysis in Theory and Applications (ATA)* , Vol. 36(1) (2020) 52-59. [**Scopus: Q4**]. AU.
263. **J.A. Tenreiro Machado, Virginia Kiryakova, Francesco Mainardi, Shaher Momani**, Fractional Calculus'S Adventures In Wonderland, *Fractional Calculus and Applied Analysis* , Vol. 21(5) (2018) 1151-1155. **ISI (IF: 3.514)**, [**Scopus: Q1***].
264. **Saif Aldeen S. AlRyalat, Lna W. Malkawi, Shaher Momani**, Comparing Bibliometric Analysis Using PubMed, Scopus, and Web of Science Databases, *JoVE* , Vol. e58494 (2019) 1-12. **ISI (IF: 0.665)**, [**Scopus: Q2**].
265. **Saif Aldeen S. AlRyalat, Shaher Momani**, *Book: A Beginners Guide to Using Open Access Data*, Taylor and Francis Group, London (2019), ISBN 9780367075064.
266. **Reyad El-Khazali, Iqbal M. Batiha and Shaher Momani**, Approximation of Fractional-order Operators. *Advanced Theory and Applications of Fractional Calculus*, Springer Proceedings in Mathematics and Statistics, Vol. 303 (2019) 121-151. (**Chapter in the Book**). [**Scopus: Q4**].
267. **Asad Freihat, Shatha Hasan; Mohammed Al-Smadi, Omar Abu Arqub and Shaher Momani**, Multistep approach for nonlinear fractional Bloch system using Adomian decomposition techniques. *Advanced Theory and Applications of Fractional Calculus*, Springer Proceedings in Mathematics and Statistics, Vol. 303 (2019) 153-171. (**Chapter in the Book**). [**Scopus: Q4**]. AU.
268. **Omar Abu Arqub, Mohammed Al-Smadi and Shaher Momani**, Soft numerical algorithm with convergence analysis for time-fractional partial IDEs constrained by Neumann conditions. *Advanced Theory and Applications of Fractional Calculus*, Springer Proceedings in Mathematics and Statistics, Vol. 303 (2019) 107-119. (**Chapter in the Book**). [**Scopus: Q4**]. AU.
269. **Ahmed Alsaedi, Feras Yousef, Samia Bushnaq Shaher Momani**, New Styles of Periodic Solutions of the Classical Six-Body Problem, *Mathematics and Computers in Simulation*, Vol. 159 (2019) 183-196. **ISI (IF: 1.409)**, [**Scopus: Q2**].
270. **Shatha Hasan, Ayat Al-Zoubi, Asad Freihet, Mohammed Al-Smadi, Shaher Momani**, Solution of Fractional SIR Epidemic Model Using Residual Power Series Method, *Applied Mathematics & Information Sciences*, Vol. 13(2) (2019) 153-161. **ISI (IF: 1.232)**, [**Scopus: Q3**].

271. **A.K. Alomari, Vedat ERTURK, Shaher Momani, Ahmed Alsaedi**, An approximate solution method for the fractional version of a singular BVP occurring in the electrohydrodynamic flow in a circular cylindrical conduit, *The European Physical Journal Plus*, Vol. 134(2) (2019) 158-169. **ISI (IF: 2.612)**, [**Scopus: Q1**].
272. **Mohammad Abdel all, Nisrein Abu-Darwish, Omar Abu Arqub, Mohammed Al-Smadi, Shaher Momani**, Analytical solutions of fuzzy fractional boundary value problem of order 2a by using RKHS algorithm, *Applied Mathematics & Information Sciences*, Vol. 13(4) (2019) 523-533. **ISI (IF: 1.232)**, [**Scopus: Q3**].
273. **Fawang Liu, Om P. Agrawal, Shaher Momani, Nikolai N. Leonenko, and Wen Chen**, Fractional differential equations 2012, *International Journal of Differential Equations*, Vol. 2013, (2011) 1-2. (Scopus), [**Scopus: Q3**].
274. **Shatha Hasan, Mohammed AL-Smadi; asad Freihet, Shaher Momani**, Two computational approaches for solving a fractional obstacle system in Hilbert space, *Advances in Difference Equations*, Vol. 2019 (2019) 1-7. **ISI (IF: 1.510)**, [**Scopus: Q1***].
275. **Shatha Hasan, Asad Freihet; Omar Abu Arqub, Mohammed Al-Smadi, Mamon AbuHammad, and Shaher Momani**, Application of Power Series Method for Solving Obstacle Problem of Fractional Order. *Proceedings of The 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)*, Jordan, 2019. [**Scopus: Q4**].
276. **Mamon AbuHammad, Mohammad Alaroud, Omar Abu Arqub, Reem Edwan, Mohammed Al-Smadi, and Shaher Momani**, Solving Fuzzy Fractional IVPs of Order 2? by Residual Power Series Algorithm. *Proceedings of The 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)*, Jordan, 2019. [**Scopus: Q4**].
277. **J.A. Tenreiro Machado, Virginia Kiryakova, Shaher Momani**, SPECIAL ISSUE: International Conference Fractional Differentiation and its Applications 2018(14 Papers selected from ICFDA 18, July 16-18, 2018, organized by the University of Jordan, Amman-Jordan8), *Fractional Calculus and Applied Analysis*, Vol. 22(1) (2019). **ISI (IF: 3.514)**, [**Scopus: Q1***].
278. **P. Agarwal, Y. Quan Chen, J. A.Machado, D. Baleanu, S. Momani**, *Preface: Advanced Theory and Applications of Fractional Calculus*, Springer Proceedings in Mathematics and Statistics, Vol. 303 (2019). [**Scopus: Q4**].
279. **Asad Freihet, Shatha hasan, Mohammed AL-Smadi, Mohamed Gaith, Shaher Momani**, Construction of Fractional Power Series Solutions to Fractional Stiff System Using Residual Functions Algorithm, *Advances in Difference Equations*, Vol. 2019 (2019) 1-17. **ISI (IF: 1.510)**, [**Scopus: Q1***].
280. **Shaher Momani, Reyad El-Khazali, Iqbal M. Batiha**, Tuning PID and PID Controllers Using Particle Swarm Optimization Algorithm via El-Khazali's Approach . *45th International Conference Applications of Mathematics in Engineering and Economics (AMEE 2019)*, Sozopol, Bulgaria, 2019. [**Scopus: Q4**]. AU.
281. **Rania Saadeh, Reem Edwan, Mohammad Alaroud, Omar Abu Arqub, Mohammed Al-Smadi, and Shaher Momani**, Application of residual power series method for solving non-linear Fredholm integro-differential equations in a fractional sense. *Proceedings of The 6th International Conference in Mathematics and Computations (IACMC 2019)*, Zarqa University, Jordan, 2019.

282. **Shatha Hasan, Mohammed Alabedalhadi, Rania Saadeh, Asad Freihet, Mohammad Al-Smadi, and Shaher Momani**, Solving the logistic equation of fractional order using the reproducing kernel Hilbert space method. *Proceedings of The 6th International Conference in Mathematics and Computations (IACMC 2019)*, Zarqa University, Jordan, 2019.
283. **Ahmad El-Ajou, Zeyad Al-Zhour, Moa'ath Oqielat, Shaher Momani, Tasawar Hayat**, Series Solutions of Nonlinear Conformable Fractional KdV-Burgers Equation with Some Applications, *The European Physical Journal Plus*, Vol. 134 (2019) 403-1. **ISI (IF: 2.612)**, [**Scopus: Q1**]. AU.
284. **Feras Yousef, Marwan Alquran, Imad A. Jaradat, Shaher Momani, Dumitru Baleanu**, Ternary-fractional differential transform schema: theory and application, *Advances in Difference Equations*, Vol. 2019 (2019) 1-13. **ISI (IF: 1.510)**, [**Scopus: Q1***].
285. **Imad A. Jaradat, Marwan Alquran Feras Yousef, Shaher Momani, Dumitru Baleanu**, On $(2 + 1)$ -physical models endowed with spatiotemporal memory index, *The European Physical Journal Plus*, Vol. 134 (2019) 360-1. **ISI (IF: 2.610)**, [**Scopus: Q1**].
286. **Ahmad El-Ajou, Zeyad Al-Zhour, Moa'ath Oqielat, Shaher Momani**, Analytical Numerical Solutions of the Fractional Multi-Pantograph System: Two Attractive Methods and Comparisons, *Results in Physics*, Vol. 14 (2019) 1-10. **ISI (IF: 3.280)**, [**Scopus: Q1**].
287. **Hussam J. Khasawneh, Zaer Abo-Hammor, Mohammad I. Al Saaideh, Shaher Momani**, Identification of hysteresis models using Real-Coded Genetic Algorithms, *The European Physical Journal Plus*, Vol. 134 (2019) 507-1. **ISI (IF: 2.612)**, [**Scopus: Q1**]. AU.
288. **Feras Yousef, Marwan Alquran, Imad A. Jaradat, Shaher Momani**, New Fractional Analytical Study of Three-Dimensional Evolution Equation Equipped With Three Memory Indices, *Journal of Computational and Nonlinear Dynamics*, Vol. 14(11) (2019) 1-7. **ISI (IF: 2.135)**, [**Scopus: Q1**].
289. **Ahmad El-Ajou, Zeyad Al-Zhour, Moa'ath Oqielat, Sunil Kumar, Shaher Momani**, Solitary Solutions for the Time-Fractional Nonlinear Dispersive Partial Differential Equations in Conformable Sense, *Chaos*, Vol. 29 (2019) 093102-1. **ISI (IF: 2.643)**, [**Scopus: Q1***]. AU.
290. **Ahmad El-Ajou, Moaath N. Oqielat, Osama Ogilat, Mohammed AL-Smadi, Shaher Momani, Ahmed Alsaedi**, Mathematical model for Simulating the movement of water droplet on leaf surface, *Frontiers in Physics*, Vol. 7 (2019) 1-9. **ISI (IF: 2.483)**, [**Scopus: Q1***]. AU.
291. **Sunil Kumar, Amit Kumar, Shaher Momani**, Mujahed Aldhaifallah; Kottakkaran Sooppy Nisar, Numerical solutions of nonlinear fractional model arising in the appearance of the stripe patterns in two dimensional systems, *Advances in Difference Equations*, Vol. 2019 (2019) 1-19. **ISI (IF: 1.510)**, [**Scopus: Q1***]. AU.
292. **Imad Jaradat, Marwan Alquran, Feras Yousef, Shaher Momani**, An avant-garde handling of temporal-spatial fractional physical models via (α, β) -differential transform schema, *International Journal Of Nonlinear Sciences and Numerical Simulations*, Vol. 21(2) (2020) 183-194. **ISI (IF: 1.033)**, [**Scopus: Q2**]. AU.
293. **Rabha Ibrahim; Samir Hadid; Shaher Momani**, Holomorphic Solutions of A Class of 3D Propagated Wave Dynamical Equations Indicated by a Complex Conformable Calculus, *Progress in Fractional Differentiation and Applications*, Vol. 7(1) (2021) 23-30. [**Scopus: Q1***]. AU.

294. **Rabha Ibrahim; Samir Hadid; Shaher Momani**, Analytic solutions of the generalized water wave dynamical equations based on time-space symmetric differential operator, *Journal of Ocean Engineering and Science*, Vol. 5(2) (2020) 186-195. [Scopus: Q4]. AU.
295. **Shaher Momani, Iqbal M. Batiha, Reyad El-Khazali**, Design of PID-Heart Rate Controllers for Cardiac Pacemaker, The IEEE International Symposium on Signal Processing and Information Technology (ISSPIT19), December 10-12, 2019, Ajman, United Arab Emirates. [Scopus: Q4]. AU.
296. **Iqbal M. Batiha, Reyad El-Khazali, Shaher Momani**, , Dynamic Responses of PI, PD, and PID Controllers for Prosthetic Hand Model Using PSO Algorithm, The IEEE International Symposium on Signal Processing and Information Technology (ISSPIT19), December 10-12, 2019, Ajman, United Arab Emirates. [Scopus: Q4]. AU.
297. **T.Hayat, Sohail A.Khan, M.Ijaz Khan, Shaher Momani, Ahmed Alsaedi**, Cattaneo-Christov (CC) heat flux model for nanomaterial stagnation point flow of Oldroyd-B fluid, *Computer Methods and Programs in Biomedicine*, Vol. 187 (2020) 105247-1. ISI (IF: 3.424), [Scopus: Q1]. AU.
298. **Shatha Hasan, Ahmad El-Ajou*, Mohammad Al-Smadi, Shaher Momani, Samir Hadid**, Atangana-Baleanu fractional framework of reproducing kernel technique in solving fractional population dynamics system, *Chaos, Solitons and Fractals*, Vol. 133 (2020) 109624-1. ISI (IF: 3.064), [Scopus: Q1*]. AU.
299. **Mohammed Shqair, Mohammed AL-Smadi, Shaher Momani, Essam El-zahar**, Adaptation of Conformable Residual Power Series Scheme in Solving Nonlinear Fractional Quantum Mechanics Problems *Applied Sciences*, Vol. 10(3) (2020) 890-1. ISI (IF: 3.424), [Scopus: Q1]. AU.
300. **Shatha Hasan, Samir Hadid, Mohammed Al-Smadi, Omar Abu Arqub and Shaher Momani**, Solutions of Fractional Verhulst Model within Modified Analytical and Numerical Approaches, *Communications in Mathematical Computations and Applications*, Springer, accepted. (Chapter in the Book). [Scopus: Q4]. AU.
301. **Reem Edwan, Rania Saadeh, Samir Hadid, Mohammed Al-Smadi, and Shaher Momani**, Solving Time-Space Fractional Cauchy Problem with Constant Coefficients by Finite Difference Method, *Computational Mathematics and Applications*, Springer, DOI: https://doi.org/10.1007/978-981-15-8498-5_2, (2020) 25-46. (Chapter in the Book). [Scopus: Q4]. AU.
302. **Rabha Ibrahim; Samir Hadid; Shaher Momani**, Generalized Briot-Bouquet differential equation by a quantum difference operator in a complex domain, *International Journal of Dynamics and Control*. Vol. 2020 (2020) 1-12. ISI (IF: 1.520), [Scopus: Q2]. AU.
303. **Shatha Hasan, Mohammed Al-Smadi, and Shaher Momani, Omar Abu Arqub**, Residual Power Series Approach for Solving Linear Fractional Swift-Hohenberg Problems, *Lecture Notes in Networks and Systems*, vol 123. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-43002-3_4, Vol. 123 (2020) 33-43. (Chapter in the Book). [Scopus: Q4]. AU.
304. **Omar Abu Arqub, Reem Edwan, Mohammad Al-Smadi, Shaher Momani**, Solving space-fractional Cauchy problem by modified finite-difference discretization scheme, *Alexandria Engineering Journal*, Vol. 59 (2020) 2409-2417. ISI (IF: 4.060), [Scopus: Q1*]. AU.

305. **Ahmad El-Ajou***, **Mohammed AL-Smadi**, **Moa'ath Oqielat**, **Shaher Momani**, **Samir Hadid**, Smooth Expansion to Solve High-Order Linear Conformable Fractional PDEs Via Residual Power Series Method: Applications to Physical and Engineering Equations, *Ain Shams Engineering Journal*, Vol. 11 (2020) 1243-1254. [Scopus: Q1]. AU.
306. **G. Sowmya**, **M.Ijaz Khan**, **Shaher Momani**, **Tasawar Hayat**, Thermal investigation of fully wet longitudinal porous fin of functionally graded material, *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 20(12) (2020) 5087-5101. ISI (IF: 1.958), [Scopus: Q2]. AU.
307. **Ahmad El-Ajou**, **Zeyad Al-Zhour**, **Moa'ath Oqielat**, **Shaher Momani**, A Class of Linear Non-Homogenous Higher Order Matrix Fractional Differential Equations: Analytical Solutions and New Technique, *Fractional Calculus and Applied Analysis (FCAA)*, Vol. 23(2) (2020) 356-377. ISI (IF: 3.514), [Scopus: Q1*]. AU.
308. **Imad Jaradat**, **Marwan Alquran**, **Shaher Momani**, **Dumitru Baleanu**, Numerical schemes for studying biomathematics model inherited with memory-time and delay-time, *Alexandria Engineering Journal*, Vol. 59(5) (2020) 2969-2974. ISI (IF: 4.060), [Scopus: Q1*]. AU.
309. **I. Abu Irwaq**, **M. Alquran**, **I. Jaradat**, **M.S.M. Noorani**, **Shaher Momani**, **Dumitru Baleanu**, Numerical investigations on the physical dynamics of the coupled fractional boussinesq-burgers system, *Romanian Journal of Physics*, Vol. 65(5) (2020) 1-12. ISI (IF: 1.460), [Scopus: Q2]. AU.
310. **Adel Ouannas**, **Amina Aicha Khennaoui**, **Shaher Momani**, **Viet-Thanh Pham**, **Reyad El-Khazali**, Hidden attractors in a new fractional-order discrete system: Chaos, complexity, entropy and control, *Chinese Physics B*, Vol. 29(5) (2020) 050504-1 ISI (IF: 1.469), [Scopus: Q2]. AU.
311. **Adel Ouannas**, **Amina Aicha Khennaoui**, **Shaher Momani**, **Viet-Thanh Pham**, **Reyad El-Khazali**, Chaos and control of a three-dimensional fractional order discrete-time system with no equilibrium and its synchronization, *AIP Advances journal*, Vol. 10(4) (2020) 1-23 ISI (IF: 1.579), [Scopus: Q2]. AU.
312. **K. Muhammad**, **T. Hayat**, **A. Alsaedi**, **B. Ahmad**, **Shaher Momani**, Mixed convective slip flow of hybrid nanofluid (MWCNTs + Cu + Water), nanofluid (MWCNTs + Water) and base fluid (Water): a comparative investigation, *Journal of Thermal Analysis and Calorimetry*, Vol. 143 (2021) 1523-1536. ISI (IF: 2.471), [Scopus: Q2]. AU.
313. **Tasawar Hayat**, **Farhat Bibi**, **Ambreen Khan**, **Shaher Momani**, Soret-Dufour aspects with activation energy in peristaltic mechanism of third-grade material with variable features, *Journal of Thermal Analysis and Calorimetry*, Vol. 143 (2021) 2749-22760. ISI (IF: 2.471), [Scopus: Q2]. AU.
314. **Samir Hadid**, **Rabha Ibrahim**, **Shaher Momani**, On the entropic order quantity model based on the conformable calculus, *Progress in Fractional Differentiation and Applications*, Vol. 7(4) (2021) 263-273. [Scopus: Q1*]. AU.
315. **Adel Ouannas**, **Amina Aicha Khennaoui**, **Xiong Wang**, **Viet-Thanh Pham**, **Salah Boulaaras**, **Shaher Momani**, Bifurcation and chaos in the fractional form of Henon-Lozi type map, *European Physical Journal (EPJ)*, Vol. 229 (2020) 2261-2273. ISI (IF: 4.304), [Scopus: Q2]. AU.
316. **Shaher Momani**, **Banan Maayah**, **Omar Abu Arqub**, The reproducing kernel algorithm for numerical solution of Van der Pol damping model in view of the Atangana-Baleanu fractional

- approach, *Fractals Journal*, Vol. 28(8) (2020) 2040007-12. ISI (IF: 3.154), [Scopus: Q1*]. AU.
317. **Shaher Momani, Omar Abu Arqub, Banan Maayah**, Piecewise optimal fractional reproducing kernel solution and convergence analysis for the Atangana-Baleanu-Caputo model of the Lienard's equation, *Fractals Journal*, Vol. 28(8) (2020) 2040010-12. ISI (IF: 3.154), [Scopus: Q1*]. AU.
 318. **Adel Ouannas, Amina Aicha Khennaoui, Shaher Momani, Giuseppe Grassi, Viet-Thanh Pham, Reyad El-Khazali, Duy Vo Hoang**, A quadratic fractional map without equilibria: Bifurcation, 0-1 test, complexity, entropy and control, *Electronics Journal*, Vol. 9(5) (2020) 1-15. ISI (IF: 1.764), [Scopus: Q2]. AU.
 319. **F. Shah, M. Ijaz Khan, T. Hayat, Shaher Momani, M. Imran Khan**, Cattaneo Christov heat flux (CC model) in mixed convective stagnation point flow towards a Riga plate, *Computer Methods and Programs in Biomedicine*, Vol. 196 (2020) 105564-12. ISI (IF: 3.424), [Scopus: Q1]. AU.
 320. **Imad Jaradat, Marwan Alquran, Shaher Momani**, Development of spreading symmetric two-waves motion for a family of two-mode nonlinear equations, *Heliyon Journal*, Vol. 6(6) (2020) 1-15. ISI (IF: 1.650), [Scopus: Q1]. AU.
 321. **Mohammad Al-Smadi, Omar Abu Arqub, Shaher Momani**, Numerical computations of coupled fractional resonant Schrödinger equations arising in quantum mechanics under conformable fractional derivative sense, *Physica Scripta Journal*, Vol. 95(7) (2020) 075218-13. ISI (IF: 2.151), [Scopus: Q2]. AU.
 322. **Tareq Eriqat, Ahmad El-Ajou, Moaath Oqielat, Zeyad Al-Zhour, Shaher Momani**, A New Attractive Analytic Approach for Solutions of Linear and Nonlinear Neutral Fractional Pantograph Equations, *Chaos, Solitons and Fractals*, Vol. 138 (2020) 1-11. ISI (IF: 3.064), [Scopus: Q1*]. AU.
 323. **Omar Abu Arqub, M. S. Osman, Abdel-Haleem Abdel-Aty, Abdel-Baset A. Mohamed, Shaher Momani**, A Numerical Algorithm for the Solutions of ABC Singular Lane-Emden Type Models Arising in Astrophysics Using Reproducing Kernel Discretization Method, *Mathematics Journal*, Vol. 8(6) (2020) 1-15. ISI (IF: 1.105), [Scopus: Q2]. AU.
 324. **Reyad El-Khazali, Iqbal M. Batiha, Shaher Momani**, The Drug Administration via Fractional-order PID-Controller, *Progress in Fractional Differentiation and Applications*, accepted June 9, 2020. [Scopus: Q1*]. AU.
 325. **Marwan Alquran, Imad A. Jaradat, Shaher Momani, Dumitru Baleanu**, Chaotic and solitonic solutions for new time-fractional two-mode KdV equation, *Romanian Reports in Physics*, Vol. 72(3) (2020) 1-11. ISI (IF: 1.940), [Scopus: Q2]. AU.
 326. **Adeeb G. Talafha, Sahar M. Alqaraleh, Mohammed Al-Smadi, Samir Hadid, Shaher Momani**, Analytic Solutions for a Modified Fractional Three Wave Interaction Equations with Conformable Derivative by Unified Method, *Alexandria Engineering Journal*, Vol. 59(5) (2020) 3731-3739. ISI (IF: 4.060), [Scopus: Q1*]. AU.
 327. **Samir Hadid, Rabha Ibrahim, Shaher Momani**, Solvability and stability of a fractional dynamical system of the growth of COVID-19 with approximation solution by fractional Chebyshev polynomials, *Advances in Difference Equations*, Vol. 338(6) (2020) 1-15. ISI (IF: 1.105), [Scopus: Q1*]. AU.

328. **Shaher Momani, Rabha Ibrahim, Samir Hadid**, Susceptible-infected-susceptible epidemic discrete dynamic system based on fractional entropy, *Entropy Journal*, Vol. 22(7) (2020) 769-775. (IF: 2.494), [Scopus: Q1]. AU.
329. **Imad Jaradat, Marwan Alquran, Ruwa Abdel-Muhsen, Shaher Momani, Dumitru Baleanu**, Higher-dimensional physical models with multimemory indices: analytic solution and convergence analysis, *Advances in Difference Equations*, Vol. 364 (2020) 1-14. ISI (IF: 1.105), [Scopus: Q1*]. AU.
330. **Sahar M. Alqarlah, Adeeb G. Talafha, Shaher Momani, Shrideh Al-Omari, Mohammed Al-Smadi**, Exact Soliton Solutions for the Conformable 4-Wave Interaction Equations by the Ansatz Method, *Fractals*, Vol. 23 (2020) 1-14. ISI (IF: 1.105), [Scopus: Q1*]. AU.
331. **Adel Ouannas, Amina Aicha Khennaoui, Shaher Momani, Viet-Thanh Pham**, The discrete fractional duffing system: Chaos, 01 test, C0 complexity, entropy, and control, *Chaos journal*, Vol. 30 (2020) 038131-13 ISI (IF: 1.579), [Scopus: Q1]. AU.
332. **Mohammed Alabedalhadi, Mohammed Al-Smadi, Shrideh Al-Omari, Dumitru Baleanu, Shaher Momani**, Structure of optical soliton solution for nonlinear resonant space-time Schrödinger equation in conformable sense with full nonlinearity term, *Physica Scripta Journal*, Vol. 95 (2020) 105208-13. ISI (IF: 2.151), [Scopus: Q1]. AU.
333. **Behzad Ghanbari, Hatira Gunerhan, Shaher Momani**, Exact optical solutions for the regularized long-wave Kadomtsev-Petviashvili equation, *Physica Scripta Journal*, Vol. 95 (2020) 105208-13. ISI (IF: 2.151), [Scopus: Q1]. AU.
334. **Iqbal M. Batiha, Ramzi B. Albadarneh, Shaher Momani, Iqbal H. Jebril**, Dynamics Analysis of Fractional-order Hopfield Neural Networks, *International Journal of Biomathematics*, Vol. 13(8) (2020) 2050083-13. ISI (IF: 0.8), [Scopus: Q2]. AU.
335. **Shatha Hasan, Banan Maayah, Samia Bushnaq, Shaher Momani**, A Modified Reproducing Kernel Hilbert Space Method for Solving Fuzzy Fractional Integro-differential Equations, *Boletim da Sociedade Paranaense de Matematica*, accepted September 14, 2020. ISI (IF: 0.8), [Scopus: Q3]. AU.
336. **Shaher Momani, Iqbal M. Batiha**, Tuning of the Fractional-order PID Controller for some Real-life Industrial Processes using Particle Swarm Optimization *Progress in Fractional Differentiation and Applications*, accepted September 21, 2020. [Scopus: Q1*]. AU.
337. **Nadir Djeddi, Shatha Hasan Mohammed Al-Smadi, Shaher Momani**, Modified analytical approach for generalized quadratic and cubic logistic models with Caputo-Fabrizio fractional derivative, *Alexandria Engineering Journal*, Vol. 59 (2020) 5111-5122. ISI (IF: 4.060), [Scopus: Q1*]. AU.
338. **Sunil Kumar, Ranbir Kumar, Shaher Momani, Samir Hadid**, A study on fractional COVID-19 disease model by using Hermite wavelets, *Mathematical Methods in the Applied Sciences*, Vol. 2021 (2021) 1-17. ISI (IF: 1.626), [Scopus: Q1]. AU.
339. **Sunil Kumar, R.P. Chauhan, Shaher Momani, Samir Hadid**, Numerical investigation on COVID-19 model through singular and non-singular fractional operators, *Numerical Methods for Partial Differential Equations*, Vol. 2020 (2020) 1-27. ISI (IF: 2.236), [Scopus: Q1]. AU.
340. **Shatha Hasan1, Mohammed Al-Smadi, Ahmad El-Ajou, Shaher Momani, Samir Hadid, Zeyad Al-Zhour**, Numerical Approach in the Hilbert Space to Solve a Fuzzy Atangana-Baleanu Fractional Hybrid System, *Chaos, Solitons and Fractals*, Vol. 143 (2021) 110506-13. ISI (IF: 3.064), [Scopus: Q1*]. AU.

341. **Sohail Ahmad Khan, T. Hayat, A. Alsaedi, Shaher Momani**, Entropy generation and Dufour and Soret effects in radiative flow by a rotating cone, *Physica Scripta Journal*, Vol. 96(2) (2021) 025209-13. **ISI (IF: 2.151)**, [**Scopus: Q1**]. AU.
342. **Amina Aicha Khennaoui, Adel Ouannas, Shaher Momani, Iqbal Batiha, Zohir Dibi, Giuseppe Grassi**, On Dynamics of a Fractional-order Discrete System with only One Nonlinear Term and Without Fixed Points, *Electronics Journal*, Vol. 9 (2020) 2179-1. **ISI (IF: 1.764)**, [**Scopus: Q2**]. AU.
343. **Yassamine Chellouf, Banan Maayah, Shaher Momani, Ahmad Alawneh and Salam Alnabulsi**, Numerical Solution of Fractional Differential Equations 2 with Temporal Two-Point BVPs Using Reproducing Kernel Hilbert Space Method, *AIMS Mathematics Journal*, Vol. 6(4) (2021) 3465-3485. **ISI (IF: 1.764)**, **ISI (IF: 1.764)**, [**Scopus: Q3**]. AU.
344. **Sunil Kumar, Surath Ghosh, Shaher Momani, Samir Hadid**, Robotnov function based operator for biological population model of biology, *International Journal of Numerical Methods for Heat and Fluid Flow*, accepted January 10, 2021. **ISI (IF: 2.871)**, [**Scopus: Q1**]. AU.
345. **Nadjette Debbouche, Shaher Momani, Adel Ouannas, M.T. Shatnawi, Giuseppe Grassi, Zohir Dibi, Iqbal Batiha**, Generating multidirectional variable hidden attractors via newly commensurate and incommensurate non-equilibrium fractional-order chaotic systems, *Entropy Journal*, Vol. 23 (3) (2021) 261-20. (IF: 2.494), [**Scopus: Q1**]. AU.
346. **Adel Ouannas, Fatiha Mesdoui, Shaher Momani, Iqbal Batiha, Giuseppe Grassi**, Synchronization of FitzHugh-Nagumo reaction-diffusion systems via one-dimensional linear control law, *Archives of Control Sciences Journal*, Vol. 31 (3) (2021) 333-345. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
347. **Nesrine Harrouche, Shaher Momani, Shatha Hasan, Mohammed Al-Smadi**, Computational algorithm for solving drug pharmacokinetic model under uncertainty with nonsingular kernel type Caputo-Fabrizio fractional derivative, *Alexandria Engineering Journal*, Vol. 60 (2021) 4347-4362. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
348. **Iqbal M. Batiha, Ramzi B. Albadarneh, Shaher Momani, Iqbal H. Jebril**, Dynamics analysis of fractional-order Hopfield neural networks, *International Journal of Biomathematics*, Vol. 13(8) (2020) 2050083. **ISI (IF: 0.8)**, [**Scopus: Q3**]. AU.
349. **Tasawar Hayat, Ikram Ullah, Ahmad Alsaedi, Shaher Momani**, Entropy Optimization in Nonlinear Mixed Convective Flow of Nanomaterials Through Porous Space, *Journal of Non-Equilibrium Thermodynamics*, Vol. 46(2) (2021) 191-203. **ISI (IF: 2.157)**, [**Scopus: Q2**]. AU.
350. **Reyad El-Khazali, Iqbal M. Batiha, Shaher Momani**, A New Discrete-Time Model of Fractional-Order PLL, *2020 3rd International Conference on Signal Processing and Information Security, ICSPIS* (2020), 9340137, Dubai, UA. [**Scopus: Q4**]. AU.
351. **Habib Ullah, T. Hayat, Salman Ahmad, M. Sh. Alhodaly, Shaher Momani**, Numerical simulation of MHD hybrid nanofluid flow by a stretchable surface, *Chinese Journal of Physics*, Vol. 71 (2021) 597-609. **ISI (IF: 2.157)**, [**Scopus: Q2**]. AU.
352. **Amina-Aicha Khennaoui, Adel Ouannas, Shaher Momani, Zohir Dibi, Giuseppe Grassi, Dumitru Baleanu, Viet-Thanh Pham**, Hyperchaotic Dynamics Of A New Fractional Discrete-Time System, *Fractals Journal*, Vol. 29(8) (2021) 2140034. **ISI (IF: 3.154)**, [**Scopus: Q1***]. AU.

353. **Mohammed Al-Smadi, Nadir Djeddi, Shaher Momani, Shrideh Al-Omari, Serkan Araci**, An attractive numerical algorithm for solving nonlinear Caputo-Fabrizio fractional Abel differential equation in a Hilbert space, *Advances in Difference Equations Journal*, Vol. 2021 (2021) 271. **ISI (IF: 1.105)**, [**Scopus: Q1***]. AU.
354. **Mohammed Al-Smadi, Hemen Dutta, Shatha Hasa, Shaher Momani**, On numerical approximation of Atangana-Baleanu-Caputo fractional integro-differential equations under uncertainty in Hilbert Space, *Mathematical Modelling of Natural Phenomena Journal*, Vol. 16 41. **ISI (IF: 1.105)**, [**Scopus: Q1**]. AU.
355. **Shaher Momani, Ranbir Kumar, HM Srivastava, Sunil Kumar, Samir Hadid**, A chaos study of fractional SIR epidemic model of childhood diseases, *Results in Physics* , Vol. 27 (2021) 104442-17. **ISI (IF: 4.019)**, [**Scopus: Q1***]. AU.
356. **Soumia Tayebi, Shaher Momani, Omar Abu Arqub**, The cubic B-spline interpolation method for numerical point solutions of conformable boundary value problems, *Alexandria Engineering Journal*, Vol. 61(2) (2022) 1519-1528. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
357. **Ahlem Ben Rabah, Shaher Momani, Omar Abu Arqub**, The B-spline collocation method for solving conformable initial value problems of non-singular and singular types, *Alexandria Engineering Journal*, Vol. 61(2) (2022) 963-974. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
358. **B Gnay, Praveen Agarwal, Juan LG Guirao, Shaher Momani**, A Fractional Approach to a Computational Eco-Epidemiological Model with Holling Type- II Functional Response, *Symmetry Journal*, Vol. 13 (2021) 1159. **ISI (IF: :2.713)**, [**Scopus: Q1**]. AU.
359. **T Hayat, Inayatullah, Shaher Momani, K Muhammad**, FDM analysis for nonlinear mixed convective nanofluid flow with entropy generation, *International Communications in Heat and Mass Transfer Journal*, Vol. 126 (2021) 105389-17. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
360. **Fatima Youbi, Shaher Momani, Shatha Hasan, Mohammed Al-Smadi**, Effective numerical technique for nonlinear Caputo-Fabrizio systems of fractional Volterra integro-differential equations in Hilbert space, *Alexandria Engineering Journal*, Vol. 61(3) (2022) 1778-1786. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
361. **Iqbal Batiha, Shaher Momani, Adel Ouannas, Zaid Momani, Samir Hadid**, Fractional-order COVID-19 Pandemic Outbreak: modeling and stability analysis, *International Journal of Biomathematics*, accepted July 2, 2021. **ISI (IF: 2.236)**, [**Scopus: Q2**]. AU.
362. **Ramzi Albadarneh, Iqbal Batiha, Shaher Momani, Adel Ouannas**, Modeling COVID-19 Pandemic Outbreak using Fractional-Order Systems, *International Journal of Mathematics and Computer Science*, Vol. 16(4), 2021, 14051421. **ISI (IF: 2.236)**, [**Scopus: Q3**]. AU.
363. **Mohamed M Mousa, Praveen Agarwal, Fahad Alsharari, Shaher Momani**, Capturing of solitons collisions and reflections in nonlinear Schrödinger type equations by a conservative scheme based on MOL, *Advances in Difference Equations*, Vol. 2021(1) (2021) 1-15. **ISI (IF: 2.803)**, [**Scopus: Q1**]. AU.
364. **Shaher Momani, Nadir Djeddi, Mohammed Al-Smadi, Shrideh Al-Omari**, Numerical investigation for Caputo-Fabrizio fractional Riccati and Bernoulli equations using iterative reproducing kernel method, *Applied Numerical Mathematics Journal*, Vol. 170 (2021) 418-434. **ISI (IF: 2.468)**, [**Scopus: Q1**]. AU.
365. **T Hayat, K Muhammad, Shaher Momani**, Melting heat and viscous dissipation in flow of hybrid nanomaterial: a numerical study via finite difference method, *Journal of Thermal Analysis and Calorimetry*, Vol. 2021 (2021) 10944-7. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.

366. **Andang Sunarto, Praveen Agarwal, Jumat Sulaiman, Jackel Vui Lung Chew, Shaher Momani**, Quarter-Sweep Preconditioned Relaxation Method, Algorithm and Efficiency Analysis for Fractional Mathematical Equation, *Fractal and fractional Journal*, Vol. 5(3) (2021) 1-14. **ISI (IF: 3.313)**, [**Scopus: Q1**].
367. **T Hayat, K Muhammad, Shaher Momani**, Numerical study of entropy generation in Darcy-Forchheimer (D-F) Bdeiwadt flow of CNTs, *International Journal of Hydrogen Energy*, Vol. 46 (2021) 34449-34462. **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
368. **Radwan Abu-Gdairi, Shatha Hasan, Shrideh Al-Omari, Mohammad Al-Smadi, Shaher Momani**, Attractive Multistep Reproducing Kernel Approach for Solving Stiffness Differential Systems of Ordinary Differential Equations and Some Error Analysis, *CMES-Computer Modeling in Engineering and Sciences Journal*, Vol. 130 (2022) 299-313. **ISI (IF: 1.593)**, [**Scopus: Q3**]. AU.
369. **Rahul Goyal, Shaher Momani, Praveen Agarwal, Michael Th. Rassias**, An Extension of Beta Function by Using Wiman's Function, *axioms Journal*, Vol. 10(3) (2021) 187. **ISI (IF: 2.236)**, [**Scopus: Q1**].
370. **Sunil Kumar, Surath Ghosh, Shaher Momani, Samir Hadid**, A study of fractional TB model due to mycobacterium tuberculosis bacteria, *Chaos, Solitons and Fractals*, Vol. 153 (2021) 111452. **ISI (IF: 2.871)**, [**Scopus: Q1***]. AU.
371. **Lei Shi, Muhammad Khan, Bakhtiar Ahmad, Wali Mashwani, Praveen Agarwal, Shaher Momani**, Certain Coefficient Estimates Problems for Three-Leaf-Type Starlike Functions, *Fractal and fractional Journal*, Vol. 5 (2021) 137. **ISI (IF: 3.313)**, [**Scopus: Q1**].
372. **Tahair Rashama, Muhammad Sajjad Shabbir, Praveen Agarwal, Shaher Momani**, On a pair of fuzzy dominated mappings on closed ball in the multiplicative metric space with applications, *Fuzzy Sets and Systems Journal*, accepted September 14, 2021. **ISI (IF: 3.343)**, [**Scopus: Q1**].
373. **Rawya Al-Deiakeh, Omar Abu Arqub, Mohammed Al-Smadi, Shaher Momani**, Lie symmetry analysis, explicit solutions, and conservation laws of the time-fractional Fisher equation in two-dimensional space, *Journal of Ocean Engineering and Science*, **ISI (IF: 2.468)**, [**Scopus: Q1**]. AU.
374. **Hasanen A. Hammad, Praveen Agarwal, Shaher Momani, Fahad Alsharari**, Solving a Fractional-Order Differential Equation Using Rational Symmetric Contraction Mappings, *Fractal and fractional Journal*, Vol. 5 (2021) 159. **ISI (IF: 3.313)**, [**Scopus: Q1**].
375. **Shatha Hasan, Nadir Djeddi, Mohammed Al-Smadi, Shrideh Al-Omari, Shaher Momani, Andreea Fulga**, Numerical solvability of generalized Bagley-Torvik fractional models under Caputo-Fabrizio derivative, *Advances in Difference Equations Journal*, Vol. 2021 (2021) 469. **ISI (IF: 1.105)**, [**Scopus: Q1***]. AU.
376. **Shaher Momani, R. P. Chauhan, Sunil Kumar Samir Hadid**, A fractal-fractional 2019-nCoV model of major disaster for human life, *Fractals Journal*, Vol. — (2021) —. **ISI (IF: 2.871)**, [**Scopus: Q1***]. AU.
377. **Shaher Momani, R. P. Chauhan, Sunil Kumar Samir Hadid**, A Theoretical Study On Fractional Ebola Hemorrhagic Fever Model, *Fractals Journal*, Vol. 30(1) (2022) 2240032-1. **ISI (IF: 2.871)**, [**Scopus: Q1***]. AU.

378. **K Muhammad, T Hayat, Shaher Momani, A. Asghar**, FDM analysis for squeezed flow of hybrid nanofluid in presence of Cattaneo-Christov (C-C) heat flux and convective boundary condition, *Alexandria Engineering Journal*, accepted October 12, 2021 **ISI (IF: 2.236)**, [**Scopus: Q1**]. AU.
379. **Nadjette Debbouche, Adel Ouannas, Shaher Momani, Donato Cafagna, Viet-Thanh Pham**, Fractional-order biological system: chaos, multistability and coexisting attractors, *The European Physical Journal Special Topics*, Vol. 2021 (2021) 1-10. (IF: 2.707), [**Scopus: Q2**]. AU.
380. **Mudassir Shams, Naila Rafiq, Nasreen Kausar, Praveen Agarwal, Choonkil Park, Shaher Momani**, Efficient iterative methods for finding simultaneously all the multiple roots of polynomial equation, *Advances in Difference Equations*, Vol. 2021 (2021) 1-11. **ISI (IF: 2.803)**, [**Scopus: Q1**]. AU.
381. **Reem Edwan, Shrideh Al-Omari, Mohammed Al-Smad, Shaher Momani, Andreea Fulga**, A new formulation of finite difference and finite volume methods for solving a space fractional convection-diffusion model with fewer error estimates, *Advances in Difference Equations*, Vol. 2021 (2021) 510 **ISI (IF: 2.803)**, [**Scopus: Q1**]. AU.
382. **Jihad Younis, Shilpi Jain, Praveen Agarwal, Shaher Momani**, Certain integral representations involving hypergeometric functions in two variables, *Mathematica Moravica*, Vol. 26(1) (2022) 27-36. AU.

Submitted Papers

1. **Amit Kumar, Shaher Momani**, Analytical solutions of fractional chemical kinetics and carbon dioxide absorbed into phenyl glycidyl ether problems with Atangana - Baleanu fractional derivative, *Journal of Mathematical Chemistry*, submitted June 3, 2020.
2. **Shaher Momani, Amit Kumar, D. Baleanu**, An efficient analytical technique for the solution of space-fractional telegraph equation with Mittag-Leffler type kernel, *Ain Shams Engineering Journal*, submitted, submitted June 15, 2020.
3. **Vedat ERTURK, Abedel-Karrem Alomari, Shaher Momani, Ahmed Alsaedi**, Generalized differential transform method applied to the fractional version of a BVP occurring in chemical reactor theory, *Calcolo Journal*, submitted December 21, 2019.
4. **Chandrashekhar Meshram, Rabha Ibrahim, Samir Hadid, Shaher Momani**, An efficient conformable fractional chaotic maps based online/offline IBSS scheme with provably security in the random oracle model, *Journal of Advanced Research*, submitted November 2, 2019.
5. **Adel Ouannas*, Amina-Aicha Khennaoui, Shaher Momani, Viet-Thanh Pham**, A Three-Dimensional Fractional Discrete System with no Fixed Point: Chaos, Control and Synchronization. *The European Physical Journal Plus*, submitted November 1, 2019.
6. **Shaher Momani, Reyad El-Khazali, Iqbal M. Batiha**, New Optimal Design of Fractional-Order PID Controllers using Particle Swarm Optimization Algorithm. *Automatica Journal*, submitted July 29, 2019.
7. **Ramzi Albadarneh*, Iqbal M. Batiha, Shaher Momani**, Dynamics Analysis of Fractional-order Hopfield Neural Networks, *Chaos, Solitons and Fractals*, submitted October 5, 2019.

8. **K. Mehrez, P. Agarwal, Shaher Momani**, Some new Hermite-Hadamard types inequalities for logarithmically convex functions and their applications, *Mathematical Methods in the Applied Sciences*, submitted on May 17, 2018.
9. **Md. Alal Hosen, M.S.H. Chowdhury, Shaher Momani, Mohammad Yeakub Ali, Ahmad Faris Ismail**, A novel analytical approximation technique for conservative systems with high non-linearity based on the rational harmonic balance method, *Applied Mathematics and Computation*, rejected and not submitted yet May 18, 2018.
10. **Praveen Agarwal, Shaher Momani, Shilpi Jain, Mehar Chand And Gurmej Singh**, Note on fractional integrals and kinetic equation associated with galuse type struve function, *Journal of Computational Physics*, submitted.
11. **M.J. Odeh, Fadi Awawdeh, Shaher Momani**, Controllable dynamical behaviors and the analysis of higher-order Burgers hierarchy with the full effects of inhomogeneities of media, *Journal of Applied Mathematics*, submitted.

Conferences and Study Visits

1. The First Jordanian Mathematics Conference, 1991, Jordan.
2. The Second Jordanian Mathematics Conference, 1994, Jordan.
3. A workshop in Teaching Sciences in the Twenty First Century, 1995, Cairo, Egypt.
4. A workshop in Teaching Calculus Using Mathematica Software, 1995, Alexandria, Egypt.
5. The Third Jordanian Mathematics Conference, 1996, Jordan.
6. Visiting Professor, Department of Mathematics, June - August 1996, Univ. of Wales, UK.
7. A workshop on Mathematics of Computation, 1997, Yarmouk University, Jordan.
8. Visiting Professor, Department of Mathematics, August 1997, Univ. of Wales, UK.
9. The 15th World Congress on Scientific Computation, Modelling and Applied Mathematics (IMACS), 1997, Berlin, Germany.
10. Sixth SIAM Conference on Optimization, 1999, Atlanta, USA,
11. A workshop on Numerical Solution of Differential Equations, 2000, Mu'tah University, Jordan.
12. A workshop on Applications of Calculus, 2001, UAE University, UAE.
13. First UAE Math-Day Conference, 2003, University of Sharjah, UAE.
14. Third International Workshop on Scientific Computing and Application, 2003, Honk Kong, China.
15. A workshop on Making Internship Programs More Effective, 2003, UAE University, UAE.
16. Second UAE Math-Day Conference, 2004, American University of Sharjah, UAE.
17. Invited speaker in Recent Advances in Mathematics Conference, 2004, India.
18. Invited speaker in The Third Conferences On Research And Education In Mathematics, 2007, Malaysia.

19. Invited speaker in The 2nd International Symposium on Nonlinear Dynamics, 2007, Shanghai, China.
20. Invited speaker in The Third IFAC Workshop on Fractional Differentiation and its Applications FDA'08, 2008, Ankara, Turkey.
21. Invited speaker in the First National Conference: SOFA 2010, 2010, Skikda University, Algeria
22. Invited speaker in Casablanca International Workshop on Mathematical Biology: Analysis and Control, 2011, Casablanca, Morocco.
23. Visiting Professor, Department of Mathematics, November 2007, Qatar University, Qatar.
24. Visiting Professor, King Abdullah University for Science and Technology (KAUST), June 2010, KSA.
25. Visiting Professor: Universiti Kebangsaan Malaysia (UKM), June 2010, Malaysia.
26. Invited speaker in The Fifth IFAC Workshop on Fractional Differentiation and its Applications FDA12, 2012 Nanjing, China.
27. Invited speaker in the International Symposium on Fractional PDEs: Theory, Numerics and Applications, 2013, Brown University, USA.
28. Invited speaker in The Sixth IFAC Workshop on Fractional Differentiation and its Applications FDA14, 2014 Catania, Italy.
29. Invited speaker in The First regional Teacher Skills Forum, December 6-7, 2014, Dead Sea, Jordan
30. Invited speaker in The 1st International Conference of The University of Jordan Library on Social Media Shaping E-Publishing, July 27-29, 2015, Amman, Jordan.
31. Invited speaker in International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM), June 3-6, 2015, Istanbul, Turkey.
32. Invited speaker in the Fifth International Platform on Integrating Arab e-Infrastructure a Global Environment, December 7-9, 2015, Casablanca, Morocco.
33. Invited speaker in The International Conference on Fractional Differentiation and its Applications, July 18-20, 2016, Novi Sad, Serbia.
34. Invited speaker in International Conference on Fundamental and Applied Sciences, August 22-26, 2016, Istanbul, Turkey.
35. A workshop on Capacity Building for Higher Education, January 24-27, 2017 Brussels, Belgium.
36. A workshop on Promotion of Innovation Culture in the Higher Education in Jordan, April 29-30, 2017, Porto, Portugal.
37. Invited speaker in Mathematical Models in Ecology and Evolution, July 10-12, 2017, London, UK.
38. Invited speaker in The 21st Conference of the Islamic World Academy of Sciences on Science, Technology and Innovation for Global Peace and Prosperity, October 8-11, 2017, Konya, Turkey.
39. Invited speaker in Major Challenges facing Higher Education in the Arab World: Quality Assurance and Relevance, November 9-11, 2017, Beirut, Lebanon.

40. Invited speaker in The 7th International Conference on Recent Development in Fluid Mechanics and Environmental Science, February 13-15, 2018. Quaid-I-Azam University, Islamabad, Pakistan,
41. A workshop on Vocational Training Centre for Undergraduate University Students and Teachers in Jordan (VTC), March 16-18, 2018, Leipzig, Germany.
42. Invited speaker in The International Conference on Fractional Differentiation and its Applications, July 16-18, 2018, Amman, Jordan.
43. Invited speaker in The 4th International Conference on E-Publishing, July 10-12, 2018, Amman, Jordan.
44. A workshop on Vocational Training Centre for Undergraduate University Students and Teachers in Jordan (VTC), September 28-30, 2018, Leipzig, Germany.
45. Invited speaker in the 3rd Annual Johnson Space Center (JSC) Cross Industry Innovation Summit (CIIS), November 6-7, 2018, NASA Johnson Space Center, Huston, Texas, USA.
46. Invited speaker in The 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), April 9-11, 2019, Amman, Jordan.
47. Invited speaker in The 6th International Arab Conference on Mathematics and Computations (IACMC 2019), April 24-26, 2019, Zarqa University, Jordan.
48. Invited speaker in The 45th International Conference Applications of Mathematics in Engineering and Economics (AMEE 2019), June 7-13, 2019 Sozopol, Bulgaria.
49. Invited speaker in The 19th IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2019, December 10-12, 2019, Ajman University, UAE.
50. Invited speaker in The First Online Conference On Modern Fractional Calculus And Its Applications (OCMFCA-2020), December 4-6, 2020, Biruni University, Istanbul, Turkey.

Courses Taught at University Level

• Mutah University: 1991-2000, 2004-2006, and 2007-2009

1. Math. 101	Calculus I	B. Sc. level.
2. Math. 102	Calculus II	B. Sc. level.
3. Math. 105	Math. for Economics	B. Sc. level.
4. Math. 112	General Mathematics	B. Sc. level.
5. Math. 201	Advanced Calculus	B. Sc. level.
6. Math. 203	Ordinary Differential Equations I	B. Sc. level.
7. Math. 211	Real Analysis I	B. Sc. level.
8. Math. 242	Linear Algebra I	B. Sc. level.
9. Math. 271	Applied Mathematics	B. Sc. level.
10. Math. 301	Ordinary Differential Equations II	B. Sc. level.
11. Math. 321	Numerical Analysis I	B. Sc. level.

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| 12. Math. 421 | Numerical Analysis II | B. Sc. level. |
| 13. Math. 481 | Special Topics in Numerical Analysis, | B. Sc. level. |
| 14. Math. 491 | Special Topics in Fluid Mechanics, | B. Sc. level. |
| 15. Math. 495 | Research Project | B. Sc. level. |
| 16. Math. 500 | Techniques of Sci. Research | Master level. |
| 17. Math. 501 | Theory of Differential Equations | Master level. |
| 18. Math. 521 | Numerical Analysis | Master level. |
| 19. Math. 579 | Fractional Calculus | Master level. |
- **Qatar University: 2006-2007**
- | | | |
|----------------|----------------------------------|---------------|
| 1. Math. 101 | Calculus I | B. Sc. level. |
| 2. Math. 215 | Mathematics for Computer Science | B. Sc. level. |
| 3. Math. 217-1 | Mathematics for Physics | B. Sc. level. |
| 4. Math. 217-2 | Mathematics for Engineering | B. Sc. level. |
| 5. Math. 498 | Special Course | B. Sc. level. |
- **United Arab Emirates University: 2001-2004**
- | | | |
|----------------|---------------------------------|---------------|
| 1. Math. 1052 | Calculus I | B. Sc. level. |
| 2. Math. 1102 | Calculus II | B. Sc. level. |
| 3. Math. 1094 | Math. for Eng. I | B. Sc. level. |
| 4. Math. 1754 | Math. for Eng. II | B. Sc. level. |
| 5. Math. 2453 | Set Theory | B. Sc. level. |
| 6. Math. 2752 | Ordinary Differential Equation. | B. Sc. level. |
| 7. Math. 3052 | Math. for Teachers I | B. Sc. level. |
| 8. Math. 3102 | Math. for Teachers II | B. Sc. level. |
| 9. Math. 3171 | Applied Mathematics | B. Sc. level. |
| 10. Math. 3203 | Numerical Analysis I | B. Sc. level. |
| 11. Math. 3495 | Research Project | B. Sc. level. |
- **Yarmouk University: 2000-2001**
- | | | |
|--------------|---------------------------------------|---------------|
| 1. Math. 101 | Calculus I | B. Sc. level. |
| 2. Math. 102 | Calculus II | B. Sc. level. |
| 3. Math. 203 | Ordinary Differential Equation | B. Sc. level. |
| 4. Math. 251 | Partial Differential Equation | B. Sc. level. |
| 5. Math. 321 | Numerical Analysis I | B. Sc. level. |
| 6. Math. 421 | Numerical Analysis II | B. Sc. level. |
| 7. Math. 621 | Special Topics in Applied Mathematics | Master level. |
- **The University of Jordan: 2009-2019**
- | | | |
|--------------|------------|---------------|
| 1. Math. 101 | Calculus I | B. Sc. level. |
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2. Math. 103	Math. For Econ.	B. Sc. level.
3. Math. 201	Calculus III	B. Sc. level.
4. Math. 202	Math. For Eng.	B. Sc. level.
5. Math. 221	Differential Equations	B. Sc. level.
6. Math. 472	Numerical Analysis	B. Sc. level.
7. Math. 701	Theory of D. E.	Master level.
8. Math. 901	Theory of D. E.	Ph.D level.
9. Math. 903	Theory of P. D. E.	Ph.D level.
10. Math. 984	Special Topics: Fractional Calculus	Ph.D level.

• **Ajman University: 2019-present**

1. Math. III	Math. For Eng.	B. Sc. level.
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Research Supervision

0.1 MSc Students

1. Khaled Moady: The numerical solution of obstacle boundary value problems, Mutah University, Jordan, (2004).
2. Salah Aldeen: Variational iteration method for solving ordinary and partial differential equations, Mutah University, Jordan, (2005).
3. Rami Qaraleh: The numerical solution of fractional integro-differential equations, Mutah University, Jordan, (2005).
4. Saed Khorshaid: A modified homotopy perturbation Method for solving linear and nonlinear differential equations, Mutah University, Jordan, (2005).
5. Mohammad Al-Shboul: Numerical methods for fourth-order and fifth-order fractional boundary value problems, Mutah University, Jordan, (2005).
6. Nesreen Mkhaterh: Variational iteration method for solving fractional ordinary differential equation, Mutah University, Jordan, (2005).
7. Sora Al-Azawi: Local and global uniqueness theorems on fractional integro-differential equations via Bihari's and Gronwall's inequalities, Al-Nahrin University, Iraq (2006).
8. Sana Abu Gurrah: Modified differential transform method for solving strongly nonlinear oscillators, Mutah University, Jordan, (2007).
9. Banan Mai'a: Chaotic dynamics and phase synchronization of fractional order dynamical systems, Mutah University, Jordan, (2007).
10. Hazim Bashirah: Numerical solution of singular IVPs, Mutah University, Jordan, (2007).
11. Jamel Al-Rwalh: Synchronization of fractional differential Chaotic System, Mutah University, Jordan, (2009).
12. Abdullah Abu Rqayiq: A non-standard finite difference scheme for two-sided space-fractional partial differential equations, Mutah University, Jordan, (2009).

13. Sumar Rawashdeh: Synchronization of fractional differential Chaotic System, Mutah University, Jordan, (2010).
14. Ala'a Fuad Abu Hatab: The Application of Spline Functions to Fractional Differential Equations, The University of Jordan, Jordan, (2011).
15. Rabeea Hudieb: The Laplace Adomian Decomposition Method for approximating the Solution of a giving up smoking system, The University of Jordan, Jordan, (2012).
16. Mohammad Ayserah: The Laplace homtopy analysis method for approximating the solutions of a fractional order differential equation model of human T-cell lymphotropic virus I (HTLV-I) infection of CD4+ T-cells , The University of Jordan, Jordan, (2013).
17. M.J. Odeh: Controllable dynamical behaviors and the analysis of higher-order Burgers hierarchy with the full effects of inhomogeneities of media, The University of Jordan, Jordan, (2013).
18. Mohammad Saed: Representation of exact solutions for systems of integro-differential equations of Volterra type, The University of Jordan, Jordan, (2014).

0.2 Ph.D. Students

1. Mohammad Zuraiqat: An efficient numerical method for solving systems of ordinary differential equations of fractional order, The Jordan University, Jordan, (2007).
2. Omar Abdul Aziz Ali: Explicit method for nonlinear fractional equations, University Kebangsaan Malaysia, Malsysia, (2007).
3. Jadallah Rezaqalla: Solutions of some constitutive equations containing fractional derivatives, University Kebangsaan Malaysia, Malsysia, (2009).
4. Khaled Moady: A non-standard finite difference schemes for solving fractional-order chaos and hyberchaos systems, University Kebangsaan Malaysia, Malsysia, (2009).
5. Asad Freihat: The muti-step differential transform method for solving systems of ordinary differential equations of fractional order, The Jordan University, Jordan, (2010).
6. Eman Abuteen: Fractional Differential Equations: Theory and Applications, The Jordan University, Jordan, (2010).
7. Samiah Saleh: On the Solution of Integro-differential Equations of Fractional Order, The Jordan University, Jordan, (2011).
8. Banan Mai'a: Application of Reproducing Kernel Hilbert Space Method to Some Ordinary Differential Equations of Fractional Order, The Jordan University, Jordan, (2012).
9. Rania Yousef: Application of Reproducing Kernel Hilbert Space Method to Some Partial Differential Equations of Fractional Order, The Jordan University, Jordan, (2013).
10. Sana Abu-Gurrah: Application of Reproducing Kernel Hilbert Space Method to Some Partial Differential Equations of Fractional Order of Physical interest, The Jordan University, Jordan, (2013).
11. Shatha Hasan: Numerical Solution Of Fuzzy Initial Value Problems Using Reproducing Kernel Hilbert Space Method, The Jordan University, Jordan, (2016).
12. Laith Alhawahsheh: Parametric Marcinkiewicz Integral Operators, The Jordan University, Jordan, (2017).

13. Mohammad Fouad: Application of Reproducing Kernel Hilbert Space Method to Some Partial Differential Equations of Fractional Order, The Jordan University, Jordan, (2017).
14. Iqbal Batiha: Optimal design of fractional-order PID controllers using a particle swarm optimization technique, The Jordan University, Jordan, (2017).
15. Asia Khalaf Albzeirat: New implementation of reproducing kernel Hilbert space method for solving a fuzzy integro-differential equation of integer and fractional orders, Universiti Malaysia Perlis, Malaysia, (2018).
16. Nadir Djeddi: Optimal design of fractional-order PID controllers using a particle swarm optimization technique, The Jordan University, Jordan, (2019).
17. Soumia Elouissi, The solution of a class of fractional partial differential equations using a new numerical method, The Jordan University, Jordan, (2019).
18. Yassamine Chellouf, The numerical solution of partial differential equations of fractional order using a modified technique, The Jordan University, Jordan, (2019).
19. Fatima Youbi, Theoretical analysis of fractional Biological systems and bioinformatics systems by using a modified fractional RKM , The Jordan University, Jordan, (2019).
20. Nesrine Harrouche, Theoretical analysis of fractional dynamical systems by using a modified fractional RKM , The Jordan University, Jordan, (2019).
21. Ahlem ben Rabah, Mathematical modelling and simulating of fractional Neural Networks using spectral Jacobi technique , The Jordan University, Jordan, (2019).
22. Soumia Tayebi, Mathematical modelling and simulating of fractional Neural Networks using Bernstein operation matrices approach, The Jordan University, Jordan, (2019).

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Signature:.....

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