CURRICULUM VITAE
Prof. Dr. Samir B. HADID

Specific field of interest: Functional Analysis and Differential Equations.

Title of Ph.D. Thesis: Some Problems in the Spectral Theory of Differential Operator.

Supervisor: Professor Dr. M. S. P. Eastham

Permanent Address: Department of Mathematics and Science, Faculty of Education and Basic Sciences, Ajman University, Ajman, P.O. Box: 346, UAE. Mobil: 052-9129559

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PROFESSIONAL EXPERIENCE:

Rank	Institute	Period	Country
Research Assistant	Mosul University	1971-1974	Iraq
Assistant Lecturer	Mosul University	1975-1976	Iraq
Lecturer	Mosul University	1979-1987	Iraq
Assistant Professor	Mosul University	1987-1992	Iraq
Visiting Professor	Technical Univ.of Wroclaw.	April-May 1981	Poland
Associate Professor	Mu'tah University	1992-1995	Jordan
Professor	Mu'tah University	1995-1998	Jordan
Professor	Al-Ain Scientific University	1998-1999	UAE
Professor	Ajman University	From 1999	UAE

TEACHING EXPERIENCE:

1- **Undergraduate Courses**: Calculus, Advanced Calculus, Applied Math, Engineering Math (1 to 5), Real Analysis, Complex Analysis, Vectors Analysis, Functional Analysis, Differential Equations, Integral Equations, Topology, Linear Algebra, Set Theory.

2- **Postgraduate Courses**: Analysis, Functional Analysis, and Differential Equations.

ADMINISTRATION:

Position (College of Education)	From	To
Head of Mathematics Branch	1979	1982
Head of Mathematics Department	1982	1985
Head of Physics Department	1984	1985
Assistant Dean	1985	1992
Deputy Dean	1985	1989
Dean	1989	1990
Vice President, Al-Ain Scientific University (UAE)	1998	1999
Head of Mathematics and Science Department –Ajman Univ.	1999	2008
Dean of College of Education and basic Sciences	2008	2011
Assistant Head of Nonlinear Dynamics Research Center (NDRC)	2021	Now

COMPUTER SKILLS:

1- I have been using the Computer for Teaching Mathematics. In particular I use Mathematica in teaching: Calculus, Differential Equations,…

2- I use the following Microsoft Applications in preparing my seminars and other works:

Microsoft Office 2000, Microsoft Word, Microsoft Excel, Microsoft Power point.

Windows XP, Internet Explorer.

3- Now I am working on e-learning by using Moodle software. Moodle is a course management system (CMS). Software package designed using sound pedagogical principles, to help educators create effective online learning communities.

Mission, Goals, Objectives and Outcomes of an Educational Program

Recently I found myself involved in the most widespread definitions of the concepts of Mission, Goals, Objectives and Outcomes of an educational program. I propose a formulation of these concepts for the B. Ed. / Teacher Training Program in Mathematics & Science offered by the Department of Mathematics and Science of the Faculty of Education and Basic Sciences.

Assessment and Evaluation Plan

The assessment is refocusing on teaching and learning as part of a worldwide paradigm shift in higher education. The shift is away from traditional measures of institutional quality, which have focused on educational inputs, and toward measures of institutional outputs centered on demonstrable evidence of actual student learning and development.

A more efficient ongoing assessment system is implemented which includes evidence of congruence between programs and institutional mission, the alignment with the College mission, achievement of stated objectives, student learning outcomes, assessment methods, assessment results, and use of data for program improvement as per the accreditation standard of the Ministry of Higher Education, and as practiced by international universities in USA, England,…etc,

Program improvement:

Feedback and data from different sources are used in the continuous improvement and the update of the program. As a consequence, the program mission, goals, courses descriptions with specific competencies are regularly updated. Program objectives and course learning outcomes are written in clear measurable terms. An Instructor Feedback on Course Implementation has been developed.

TRAINING AND EDUCATIONAL OPPORTUNITIES:

1- Fifth International Conference on Differential Equations, April 1979, Dundee, U.K.

2- Course in Methods of Teaching Math. to Non-Mathematicians, Feb. 1981,
   British Council, Baghdad, Iraq.

3- Course in Educational Technology, Mosul Univ., 1982, Iraq.

4- First Arab Conference on Mathematics, Oct. 1982, Saudi Arabia.

5- 19th International Congress of Math (1986), Berkley, USA.

6- Fourth Arab Conference of Mathematics, April 1987, Iraq.

7- Third International Conference on Fractional Calculus, May 1989, Japan.

8- Second Jordanian Mathematics Conferences, Sept. 1994, Jordan.

9- Fourth Int. Conference on Function Spaces, Aug. 1995 Poland.

10- Third Jordanian Mathematics Conference,Sept.1996, Jordan.

11- Invited speaker to ICDE-8 (The Eighth International Colloquium on Differential Equations. Plovdiv; August 18-23, 1997) .

12- The first National Conference on Mathematical Sciences, 21-23,Nov. 1999, United Arab Emirates University, Al-Ain, UAE.

13- Math day 2005, 2004,2003. 2006, 2007, 2008, 2009, 2010, 2011, UAE.

14- ICM 2006, 21-28 August, Madrid, Spain.

15- The 6th International Conference on Differential Equations and Dynamical Systems, May 22-26, 2008, Baltimore, Maryland, USA.

16-   Recent trend in Mathematics, Bahrain University, 12-14 December 2008.

17-   Dean of College of Education Conferences in Khartoum, Sudan, 2009.

18-   ICM 2010, 19-27 August 2010, Hyderabad, India.

19-   Khwarizmi Denay, 1-3 Dec 2010, Turkmenistan.

20-   The 9th MathDay 2011, which organized by the AUST, I was the head of organizing

committee.

21-   Turkmenistan Tradition and Heritage, Ashgabat 10-13 November 2011, Turkmenistan.

22-   AUST Mathematical Olympiad, First Edition, Ajman, UAE, 2012.

23-   The 10th MathDay 2012, which organized by the AUS, I was member of the organizing committee.

24-   The 12th MathDay 2014, which organized by the AUD, 2014.

25-   ICM 2014, 13-22, August 2014, SEOUL, North Korea.

26-   International Conference on Chemistry, Physics, and Maths (ICCPM) 2015 in Cebu. Philipino.

27-   9th International Conference on Applied Physics and Mathematics (ICAPM 2019). Chulalongkorn University, Bangkok: 21-23 January, 2019.

28- All Local Conferences on Mathematics Organized by Iraqi Society of Physics   and Mathematics in: 1975,1976,1979,1980,1982,1984,1986,1987,1988,1989.

29-International Conference on Differential and Difference Equations and Applications, Amadora, Portugal, 5-9 June 2017. . (Represent Paper) .

SOCIAL, CULTURAL, ACADEMIC ACTIVITIES:

1. Secretary to the Iraqi Society of Physics and Mathematics, Mosul,1979-1982.
2. President of the Iraqi Society of Physics and Mathematics, Mosul,1982-1984.
3- Member of Cultural and Social Center, Mosul Univ., 1981-1982.
4 - Member of Board of the Cultural and Social Center, Mosul Univ.,1981- 1982.
5- Secretary of the 5th Conference of the Iraqi Society of Physics and Maths, 1981.
6- Member of the preparatory Committee for the 4th Scientific and Educational Forum at Mosul University, May 1984.
7- Member of the Consulting Committee for Higher Education, Ministry of Higher Education, Iraq, 1989.
8- Member of the Iraqi Society of Physics and Mathematics, since 1971.
9- Member of the American Mathematical Society (AMS), since 1986.
10- Member of the London Mathematical Society (LMS), since 1996.
11- Referee of Abdul-Hameed Showman Foundation. Mathematics Prize, 16June1997.
12- Selected as a member of "who's who" in Science in the word,1998, Marquis, USA.
13- Distinguished Professor of Mosul University, Academic Year 1990-1991.
14- Editor-in-Chief, J. of Education and Science, Mosul University, Iraq,1989-1992.
15- Head of Student Disciplinary Committee, Mosul-Univ., 1985-1992.
16- Head of School Supervision Committee, College of Education,1985-1992.
17- Liaison Committee with the Ministry of Education in the Governor of Nineva, 1985-1992.
18- Member of the Editorial Board of Journal of Mu'tah Lil-Bohooth Wa Al-Dirasat, Mu'tah University, Jordan, since 1993.
19- Chairman of Academic Promotion Committee, Faculty of Science, Mu'tah University, Jordan, year 1993/1994.
20- Supervision of Mathematics in Mu'tah-University School, 1995- 1997.
21- Member of the Organizing Committee of the Second Jordanian Mathematics Conference, Sept. 1994, Jordan.
22- Training course in Mathematics to Ministry of Education and Youth, Department of

Al-Ain Educational zone, 15-25 May 1999.

23- Chairman of the Research and Higher Studies Committee, Ajman University, Al-Ain Campus.

24- Chairman of the Examination Committee, Ajman University, Al-Ain and Ajman Campuses.

25 - Chairman of Evaluation and Measurement Unit, Ajman Univ., Al-Ain 2000-2003.

26 - Member of Academic Promotion Committee, Ajman University, since 2004.

27 - Member of Academic and Study Plan Committee, Ajman University, since 2004.

28- Reviewer for Zentralblatt Mathematics.

29- Chair and Member of the Organizing Committee of the MathDay, 2004 (AUS), 2005 (UAEU), 2006 (Sharjah University), 2011 (AUST), UAE.

30- Member of the Editorial Board of of Al-Rafidain Journal of Computer Sciences and Mathematics, University of Mosul, Iraq, since 2010.

31- Member of the Editorial Board of Journal of the Association of Arab Universities for Basic and Applied Sciences, University Of Bahrain, since 2004.

32- Member of Journal Pure and Applied Mathematics, Jordan, since 2008.

33- Member of Iraqi internet writer, 2010.

34- Associated Editor, Journal of Numerical and Computational Method in Sciences and Engineering, Elsevier, 2020.

35- Chairman of the Committee for Re-accreditation of the Bachelor in Education Technology/ Teacher Training Program in Mathematics and Science, Ajman Univ., 2005-2006.

36- Three consultation Committee of Academic Promotion, Sharjah University, 2004-2006.

37- Authored of (170) Articles in International Heritage, Tradition, and Cultural. Published in different journal and internet site.

38- Chair of Master Thesis Examiner, Bahrain University, 2017.

39- Chair of Master Thesis Examiner, American University Sharjah, 2020.

40- Two promotion to professor ship, Iraq, 2017.

41- Member of Graduate and research committee. 2017

42- Distinguish researcher of college of Humanities and Sciences in 2020.

Research Grants:
1. Ajman University 48,000 DH UAE, Ref: 2019-IRG-HBS-11
2. Ajman University 21,000 DH UAE, Ref: 2020-COVID 19-08
3. AI For Health Grant: Microsoft- COVID-19 grant – ID: 00011000021
4. Ajman University 20,000 DH UAE, Ref: 2021-IRG-HBS-24

REFERENCES:

1. Prof. Dr. Ali Sayfi, Department of Mathematics, AUS, UAE. Tel: 00971-50-6322056, e-mail: sayfy@aus.ac.ae, UAE.

2. Professor Dr. Shaher Momani, Dean of Humanities and Basic Sciences, Ajman University, S.Momani@ju.edu.jo, 0971547617772, UAE.

3. Prof. Dr. Ahmad Ankit, Dean of Research, Hamdan Bin Mohammed Smart University, ankit@ajman.ac.ae, 00971506416882, UAE.

Publication of Prof. Dr. Samir Bashir Hadid:

A-Books:

1- Complex Functions, Mosul University Press, 1982.

2- Introduction to General Topology, Mosul University Press, 1988.

3- Translation of R. Churchill, J. Brown, and R. Vehrey, Complex Variables and Application (Third edition), Mosul University Press, 1985.

4- Differential Equations with Applications, International publisher, Jordan, 2007.

5- Mosul in the Mid of Last Century, Al-Dar Arabia for Publication, Beirut, 2013.

6- Ajman University, A journey of excellence and giving 1988-2021, Published September 2021.

B - Articles:

[1] Samir Hadid, "Estimates of Liouville-Green Type for Solutions of Systems of Diff. Equations", Proc. Royal Soc. Edinburgh, 83A, 1979, 1-9, UK.

[2] Samir Hadid, "Estimates for Solutions of 4th-Order Differential Equations with Complex-Valued Coefficients", Arab J. Math., Vol.2, Nos.1, 1 and 2, 1981, 43-58.

[3] Samir Hadid, "Exponentially large Estimates for Solutions of Systems of Diff. Equations", Arab J. Math., Vol. 5, Nos. 1 and 2, 1984, 69-80.

[4] Samir Hadid and Josif Ghanim, "Liapunov Stability of Differential Equations of Non-Integer Order", Arab J. Math., Vol. 7, Nos. 1 and 2, 1986, 7-17.

[5] Samir Hadid, "On the Conditions for the Non-Oscillatory Solutions of Non-Linear Higher Order Differential Equations", J. Progress of Mathematics, Vol.21(1), 1987, 23-28, India.

[6] Samir Hadid, "On the Conditions for Non-Oscillatory Solutions of Non-Linear Differential Equations of Non-Integer Order", <u>J. Education and Science</u>, Vol.5, 1987, 73-82, Iraq.

[7] Samir Hadid, "On the Solutions of Certain Type of Diff. Equations with Fractional Derivative", Int. (Tokyo) Conference Proceedings (1990), Fractional Calculus and Its Applications, 52-55, Japan.

[8] Samir Hadid, "Bounded Non-Oscillatory Solutions of Non-Linear Higher Order, Diff. Equations", <u>J. Education and Science</u>, Vol.14, 1993, 294-299, Iraq.

[9] Samir Hadid, "Application of Ascoli's Lemma on Solutions of Generalized Order Differential Equations<u>, 4th Int. Conference on Function Space</u>, 28 August -1 September, 1995, Poland.

[10] Samir Hadid, "Local and Global Existence Theorems on Diff. Eqs. of Non-Integer Order", <u>J. Fractional Calculus</u> , Vol.7, May (1995), 111-115, Japan.

[11] Ryszard Grzaslewicz and Samir Hadid, "On the geometry of the space of operator-valued maps<u>, Ttbinger Berichte zur Funktional analysis</u>, Heft 4, Jahrgang 94/95, 102-106, Germany. Also it is published in <u>Revista Mathematica de la Universidad Complutense De Madrid</u>, Titled "Denting Points in the Space of Operator-Valued Continuous Maps", Vol.9, nymero 2, (1996), 289-294, Spain.

[12] Samir Hadid, "Unit Balls with a Nonexpansive Map<u>", PanAmerican Mathematical Journal</u>, 5(1995), No. 3, 31-37, USA.

[13] Shaher Momani and Samir Hadid, "The Renormalized Energy Associated to a Harmonic Map", PanAmerican Mathematical Journal, 5 (1995), No. 3, 1-3, USA.

[14] Samir Hadid, Basim Masadah, and Shaher Momani, "On the Existence of Maximal and Minimal solutions of Diff. Equations of Non-Integer Order", <u>J. Fractional Calculus</u>, Vol.9, May (1996), 41-44, Japan

[15] Samir Hadid, Ali Al-Taani, and Shaher Momani, "Some Existence Theorems on Differential Equations of Generalized Order through a Fixed-Point Theorem", <u>J. Fractional Calculus</u>, Vol.9, May (1996), 45-49, Japan.

[16] Samir Hadid and Yuri Lukhko, "An Operational Method for Solving Fractional Differential Equations of an Arbitrary Real Order<u>", PanAmerican Math</u> J., 6(1996), No.1, 57-73, USA.

[17] Samir Hadid and Bassim Massada, "A Characterization of Banach Space with Nonexpansive Map", Mu'tah J. for Research and Study, Vol.11,No.6, 33-49, 1996. Jordan.

[18] Samir Hadid, Basim Massada, and Shaher Momani, "Solution of Differential Equations of Non-Integer Order in L^2 and C Spaces", <u>Mu'tah J. for Research and study</u>, Vol.(12), No.1, 169-181, 1997, Jordan.

[19] "Theory and Applications of Fractional Differential Equations", <u>The Eighth Int. Colloquium on Differential Equations</u>, Plovdiv; Invited Speaker, August 18 - 23, 1997.

 [20] Shaher Momani and Samir Hadid, "An Algorithm for numerical Solutions of Fractional Order Differentia Equations", <u>J. Fractional Calculus</u>, Vol.15, 61-66, (May) 1998, Japan.

[21] Samir Hadid and Shaher Momani, "Asymptotic Behavior of the maximal and Minimal Solutions of Diff. Equs. of Non-Integer order", Far East J. Mathematical Science (FJMS), 6(1), 31-39, 2002.

[22] Samir Hadid and Shaher Momani, "Dependence of solution of Differential Equations with Non-Integer order on Initial Condition and Parameters", Al-Manarah , Vol.(XI), No.2, April 2003, 69-76. Jordan

[23] Samir Hadid and Shaher Momani, "Some Comparison Results for Integro -Fractional Differential Equations", Journal Fractional Calculus, Vol. (24), Nov. 2003, 37- 44, Japan.

[24] Shaher Momani, Samir Hadid and Zakaria Alawnah, "Some Analytical Properties of Solutions of D. E. of Non-Integer order," <u>International J of Mathematics and Mathematical Sciences</u>, Vol.(2004), No.13,697-701, USA.

[25] Shaher Momani and Samir Hadid, "On the Continuous Dependence of Solutions of Integro-Fractional Differential Equations with Respect to Initial Conditions, <u>Nonlinear Functional Analysis and Applications</u>, Vol.(10), No.(3), 2005, 379-386, Korea كوريا

[26] Shaher Momani and Samir Hadid, "On the inequalities of Integro-Fractional Differential Equations", <u>J. of Applied Mathematics</u>,   No.1, Vol. (12), 2003, Bulgaria.

[27] Shaher Momani and Samir Hadid, "Lyapunov Stability Solutions of Fractional Integro- D. E.", <u>International J of Mathematics and Mathematical Sciences</u>, No. 45-48, 2503-2507, 2004 , USA.

[28] Samir Hadid, "The Great Mathematician Kamal Al-Deen Bin Younis Al-Mosuly", Ajman University of Science and Technology Journal, Vol. (12), No. 1, pp149-171, 2007.

[29] Samir Hadid, Shaher Momanim and Rabha Ibrahim "Solutions of Integro-Fractional Differential Equations in L^2 and C Spaces", The 6th International Conference on Differential Equations and Dynamical Systems, May 22-26, 2008, Baltimore, Maryland, USA.

[30] Samir Hadid, "Some Results on Integro-Fractional Differential .Equations", International conference on Recent Trend in Mathematical Science, Bahrain University 10-12 Nov. 2008.

[31] Samir Hadid, "Standards for Quality and Academic Accreditation", Ajman University of Science and Technology Journal, Vol. (14), No. 2, pp45-72, 2009.

[32] Shayma Adil Murad, Hussein Jebrail Zekri, and Samir Hadid, "Existence and Uniqueness Theorem of Fractional Mixed Volterra- Fredholm Integro-differential Equation with Integral Boundary Conditions", Hindawi Publishing Corporation, International Journal of Differential Equations, Volume 2011, Article ID 304570, 15 pages, doi:10.1155/2011/304570.

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[34] Shayma Adil, Rabha Ibrahim, and Samir Hadid, "Existence and Uniqueness for solution of Differential Equations with Mixture of Integer and fractional Derivative", Proceedings of the Pakistan Academy of Sciences, 49 (1): 33-37 (2012), http://www.paspk.org/.

[35] Rabha W. Ibrahim, Samir B. Hadid, "Neural Network Technique to Estimate the Solutions of Burgers-Huxely and Burgers-Fisher Equations", Antarctica Journal of Mathematics, Vol.9 (6), 503-511, Sept. 2012.

[36] Hamid A. Jalab, Rabha W. Ibrahim, Shayma A. Murad and Samir B. Hadid, "Exact and numerical solution for fractional differential equations based on neural network", proceeding of the PAS, Vol. 49, No. 3, Sept 2012, 199-209.

[37] Shayma Adil and Samir Hadid, " Existence and Uniqueness Theorem for Fractional Differential Equation with Integral Boundary Condition", JFCA , Vol. 3, July 2012, No. 6, pp: 1-9, http://www.fcaj.webs.com/, 2012.

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[39] Samir Hadid and Ahcen Merad "Homotopy Analysis Method for Solving Fractional Differential Equations", Australian J. of Basic applied Sciences, 9(32), 233-237, 2015.

[40] Ahcen Merad and Samir Hadid, "Analytic Solution of Non-Integer Extra-Ordinary Differential Equation Via Adomain Decomposition Method", Malay Journal of mathematic 4(1), (2016) 126-135.

[41] Samir Hadid and Ahcen Merad, "Variational Iteration Method for Solving Problems with Integral Boundary Conditions", ICDDEA, Amador, Portugal, June 2017.

Also published in: Springer Proceeding in Mathematics and Statistics, Differential and Difference Equations with Applications, Vol. 230, and pp: 133-140. E-Book ISBN 978-3-319-75647-9, DOI: 10.1007/978-3-319-75647-9, ISSN: 2194-1009, Germany, (Scopus) 2018.

https://link.springer.com/chapter/10.1007/978-3-319-75647-9_11

[42] Rabha W. Ibrahim, Samir B. Hadid, "The EOQ Model: A differential cyclic system for calculating Economic Order Quantity", International Journal of Analysis and Applications (ISI), 16(3) (2018), 437-444. Canada.

[43] Rabha W. Ibrahim, Samir B. Hadid, "A new method for the Economic Laws of Extinction Using the Fox- Wright- type Function", Journal of Science and Technology, Vol. 10, No. 3 (2018), Malaysia, Sept. 2018.

[44] Shyma Adil and Samir Hadid, "On The Solution of Mixed Order Fractional Integro-D. E. with Integral Boundary Conditions" Fractional Differentiation and its Applications, January 2018, SSRN Electronic Journal, DOI: 10.2139/ssrn.3271377

[45] Ahcen Merad and Samir Hadid, "A Study of Fractional differential Equations with integral conditions", First Sharjah Int. Spring School in PDEs and Numerical Analysis, 25-27 March 2018, UAE.

[46] R W Ibrahim; Hossein Jafari; H A Jalab; and Samir B. Hadid, "Local fractional system for economic order quantity using entropy solution", Advances in Difference Equations. Springer, 1-11, 2019 (2019.96). https://doi.org/10.1186/s13662-019-2033-4, Scopus, (Scopus, Q1).

[47] Samir Hadid, R W Ibrahim and NORSHALIZA KAMARUDDIN, "A new method of human brain segmentation utilizing a class of power series solutions of Fractional differential", IOP Conf. Series: Journal of Physics: Conf. Series **1298** (2019) 012012 doi:10.1088/1742-6596/1298/1/012012.
10 September 2019, (Scopus Q3).

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[49] R. Ibrahim, S. Hadid, Shaher Momani, and Chandrashekhar Meshram "Analytic Solutions of a 3-D propagated wave dynamical equation formulated by conformable calculus", Progress Fractional Differ. Appl. 1, No. 1, 1-10 (2020), http://dx.doi.org/10.18576/pfda/010101 , published 1st January 2020. http://www.naturalspublishing.com/show.asp?JorID=48&pgid=0, 98%, Scopus Q1 stars.

[50] Shatha Hasan, Ahmad El-Ajou , Samir Hadid, Mohammed Al-Smadi, and Shaher Momani, "Atangana-Baleanu Fractional framework of reproducing kernel technique in solving fractional population dynamics System', Journal: Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena, Volume 133 April 2020, 109624, https://doi.org/10.1016/j.chaos.2020.109624, https://www.sciencedirect.com/journal/chaos-solitons-and-fractals, 96%, Scopus Q1*.

[51] 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", Communications in Mathematical Computations and Applications, pp 25-46, Springer, Published 24 Nov. 2020, (Scopus). **Doi:10.1007/978-981-15-8498-5_2.**

https://link.springer.com/chapter/10.1007/978-981-15-8498-5_2

[52] Shatha Hasan, **Samir Hadid**, Mohammed Al-Smadi, Omar Abu Arqub, and Shaher Momani, "Solutions of Fractional Verhulst Model by Modified Analytical and Numerical Approaches", Communications in Mathematical Computations and Applications, pp 233-260, Springer, Published 24 Nov. 2020, (Scopus). **Doi:10.1007/978-981-15-8498-5_11.**

https://link.springer.com/chapter/10.1007%2F978-981-15-8498-5_11

[53] R. Ibrahim, S. Hadid, and S. Momani, "Generalized Briot-Bouquet differential equation by a Quantum difference operator in a complex domain", International Journal of Dynamics and Control DOI: https://doi.org/10.1007/s40435-020-00616-z, Scopus Q2. 56%, Published 14 March 2020.

https://www.springer.com/journal/40435

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 https://www.springer.com/journal/40819 . . DOI: 10.1007/s40819-020-00850-1.

[55] Al-Smadi, M., Abu Arqub, O., Hadid, S., "An attractive analytical technique for coupled system of fractional partial differential equations in shallow water waves with conformable derivatives", Communications in Theoretical Physics Vol. 72 Number 8,085001, (CTP-200104), Scopus Q2, 1Feb. 2020. Published 15 July 2020. https://iopscience.iop.org/article/10.1088/1572-9494/ab8a29.

[56] 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 Unied Method, Alexandria Engineering Journal, Volume 59, Issue 5, October 2020, Pages 3731-3739. Scopus: Q1*.

https://www.sciencedirect.com/science/article/pii/S1110016820302908

[57] Samir Hadid; Rabha Ibrahim; Dania Altulea; and 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, Adv Differ Equ. 2020; 2020(1): 338. Published online 2020 Jul 8. doi: 10.1186/s13662-020-02791-x. Q1stars 93%.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7341714/

[58] Shaher Momani, Rabha Ibrahim, and Samir Hadid, "Susceptible-infected-susceptible epidemic discrete dynamic system based on fractional entropy. https://www.mdpi.com/1099-4300/22/7/769 *Entropy* **2020**, *22*(7), 769; **Received: 2 June 2020 / Revised: 9 July 2020 / Accepted: 9 July 2020 / Published: 14 July 2020. https://doi.org/10.3390/e22070769**. Scopus Q1. 87%

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https://doi.org/10.1088/1402-4896/abb420
https://iopscience.iop.org/article/10.1088/1402-4896/abb420.

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DOI: 10.1002/mma.7065. https://onlinelibrary.wiley.com/doi/10.1002/mma.7065.

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https://www.scopus.com/record/display.uri?eid=2-s2.0-85098063815&origin=resultslist
https://www.sciencedirect.com/science/article/abs/pii/S0960077920308985

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https://www.scopus.com/record/display.uri?eid=2-s2.0-85097399085&origin=resultslist
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