

جامعة الزيتونة الأردنية

QF11/0110 - 3.1E

Curriculum Vitae Form - Procedures of Faculty Transfer and Promotion

CURRICULUM VITAE

Full name: Prof. Dr. Amjed Mah'd Moh'd Zraiqat.

Department/Faculty, Mathematics / Faculty of Sciences and IT

University, City, Jordan: Al Zaytoonah University of Jordan,

Amman, Jordan

Phone: Number/s:

: 00962 - 6 -4291511 / ext. 335 : 00962-79-0248346

Fax: Number/s: 00962 - 6 -4291432

E-mail: <u>amjad@zuj.edu.jo</u> <u>racusjordan@mail.ru</u>

Homepage: https://scholar.google.com/citations?user=w60aMe8AAAAJ&hl=en

1. Personal Data

Date of Birth: 15th November, 1964 Nationality: Jordanian.

2. Education

- Ph.D. (Mathematics Applied Mathematics/ Partial Differential Equations) 1996, Belarusian State University (BSU), Minsk, Belarus,
 - B.Sc. & M.Sc. (Applied Mathematics) Belarusian State University (BSU), Minsk, Belarus, 1984-1989.
 Thesis: Localization of the Characteristic Numbers of the Linear Integral Equations.





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3. Ph.D. Dissertation

Thesis title: 'Singular Solution and Integral Representations of Solutions of Elasticity of Boundary Value Problems in Stresses'.

Key words: elasticity theory, stress, displacement, equations Lame, Beltrami –Michell, Cauchy, singular solution, fundamental matrix, integral representation, overdetermined system, compatibility condition, partial differential equation.

Research Synopsis: Two statements of boundary value problem of elasticity theory in stresses are analyzed, of which is based on Beltrami–Michell system, another one is based on a system of variable order composed of Cauchy equilibrium equation and Beltrami–Michell equation relative to tangential stress tensor components.

Fundamental matrix, Green formulae and integral representations of smooth solutions of above mentioned systems are derived.

Obtained results may be used for determination of stress state of rigid bodies by boundary-integral equation method.

4. <u>Employment</u>

1 st Oct. 2020-Present	: Dean of Faculty of Sciences and IT, Al Zaytoonah University of Jordan
5 th Oct 2016-30 th Sep. 2020	: Head of Department of Mathematics, Faculty of Science and IT, Al Zaytoonah University of Jordan
5 th Oct 2015-30 th Sep. 2016	: Department of Mathematics, Faculty of Science and IT, Al Zaytoonah University of Jordan
5 th Oct. 2013- 30 th Sep. 2015	: Head of Department of Mathematics, Faculty of Science and IT, Al Zaytoonah University of Jordan
5 th Oct. 2012 - 30 th Sep. 2013	: Vice Dean of Student Affairs, Al Zaytoonah University of Jordan

Academic Positions

11th Mar. 2019- Present : Professor



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		Department of Mathematics, Faculty of Science and IT, Al Zaytoonah University of Jordan
	Nov. 2011-11 th 2019	: Associate Professor Department of Mathematics, Faculty of Science and IT, Al Zaytoonah University of Jordan
Sep. 2011	1999 – 23 th Nov.	: Assistant Professor - Department of Mathematics, Faculty of Science and IT Al Zaytoonah University of Jordan
Sep.	1996 – Sep. 1997	: Assistant Professor - Department of Mathematics, Faculty of Sciences and IT Al Zaytoonah University of Jordan
Sep.	1992 – Jan. 1996	: Teaching Assistant Belarusian State University (BSU), Minsk, Belarus Taught Special courses: Tutorial for basic courses.
Oct.	1989- Jun. 1992	: Lecturer Alkarak Government College, Alkarak, Jordan.

Administrative Positions

- Dean of Faculty of Sciences and IT, Al Zaytoonah University of Jordan, September Oct. 2020-.
- Head of Department of Mathematics, Faculty of Sciences and IT, Al Zaytoonah University of Jordan, September Oct. 2016 2020.
- Head of Department of Mathematics, Faculty of Sciences and IT, Al Zaytoonah University of Jordan, Jordan, Oct. 2013 Oct. 2015.
- Vice Dean of Student Affairs, Al Zaytoonah University of Jordan, Jordan, Oct. 2012 Oct. 2013.

5. <u>Research Interests</u>

Applied Mathematics, Partial Differential Equations.

6. <u>Membership in Scientific Societies and Associations</u>

- Doctoral Scholarship, Belarusian State University, 1992-1996.
- Ministry of Higher Education, Scholarship, Belarus, 1983-1989.



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7. <u>Teaching Experience</u>

- Graduate Courses
 - Biostatistics
- Undergraduate Courses
 - Applied Mathematics
 - o Special Functions
 - Vectors
 - Ordinary Differential Equations II
 - Calculus III
 - Mathematical Statistics
 - Theory of Probability
 - Statistical Techniques
 - Statistical Techniques
 - o Linear Algebra I

- Partial Differential Equations
 Mathematical motified
- Mathematical methods
- Ordinary Differential Equations I
- Calculus III for Engineers
- Calculus II
- Calculus I
- o Linear Algebra I
- History of Mathematics

8. Supervision of Graduate Research

Thesis Title (Master)	Student Name	Year
Measurement theory and its applications in probability theory	Raafat Tomah Haddad	2005

9. <u>Grants</u>

- Research Project: "The Efficiency of the Training Program for Developing Teaching Methods of Math Teachers in the School of Um-Al-Basateen Municipality", Al Zaytoonah University of Jordan, 13,870 Jordan Dinar, October, 2018- January, 2020.
- Research Project: "Mathematical Model for Stability Analysis of Maximum Power Point Tracking Control in Solar Systems", Al Zaytoonah University of Jordan, 16,900 Jordan Dinar, April, 2019-April, 2021.



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10. <u>Membership of Committees</u>

No.	Dates	Description
		General Chair: The 10th International Conference on
1.	2021	Information Technology – ICIT2021, Al Zaytoonah
		University of Jordan – Jordan, 14-15 July 2021
		Technical program Committee: The 9th International
2.	2019	Conference on Information Technology - ICIT'2019 – Al
		Zaytoonah University of Jordan – Jordan
		Organizing Committee: The 6th International Arab
3.	2019	Conference on Mathematics and Computations (IACMC
		2019), April 24-26 - 2019, Zarqa University.
		Thesis Examiner: Alaa AlaaIdeen Hamzeh, Master Degree
4.	. 2018	"Solutions of Nonlinear Volterre-Fredholm Integro-
		Differential Equations", Zarqa University – Jordan
		Chair of the reception Committee: The 8th International
5.	2017	Conference on Information Technology - ICIT'2017 – Al
		Zaytoonah University of Jordan – Jordan
	2017	Technical and Organizing Committee: The 8th International
6.		Conference on Information Technology - ICIT'2017 – Al
		Zaytoonah University of Jordan – Jordan.
	2016-present	Member of Scientific Research Council - Faculty of Science
7.		and Information Technology - Al Zaytoonah University of
		Jordan
	2015	Organizing Committee: The 7th International Conference on
8.		Information Technology - ICIT'2015 – Al Zaytoonah
		University of Jordan - Jordan, May 2015.
		Colloquium Program Organizing: the 3rd Information
9.	2014	Technology Colloquium 2014 - ITC'14, Faculty of science
).		and IT, Al Zaytoonah Uni. of Jordan- will be on 6th May,
		2014.
10.	2014	Participation in the workshop entitled "Planning for the study
10.		of self-evaluation and its implementation mechanisms"
11.	2013	Technical Committee: The 6th International Conference on





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		Information Technology - ICIT'2013 – Al Zaytoonah
		University of Jordan - Jordan, May 2013.
12.	2011-2015	Member of the disciplinary committee of students at the university.
13.	2011-2013	Member of the Quality Assurance Committee at the Faculty of Science & IT
14.	2010-2015	Member of the Higher Committee for Elections of the student council in the University
15.	2009-2013	Representative of the Department of Mathematics in the Faculty of Science & IT council.
16.	2004	Member of the organizing committee of the sixth Jordanian international congress of mathematics at Yarmouk University, Irbid - Jordan (Aug. 31 - Sept. 3, 2004).
17.	2003-present	Chairman of the Commission of Inquiry for Faculty of Science.
18.	2002	Member of the organizing committee of the fifth Jordanian international congress of mathematics, Yarmouk University, Irbid - Jordan (Sept. 3 - 5, 2002).
19.	2001-2005	Member of the Jordanian Mathematical Society Council
20.	2001-present	Member of the Jordanian Mathematical Society
21.	1999-present	Chairman of the Cultural and Social Committee for Faculty of Science.

11. Participation in or organization of curricular and/or extra-curricular activities

	No.	Curricular	Year
ſ	1.	Mathematics, Al Zaytoonah University, Jordan	2013,2016,2017,2018
	2. Mathematics, Applied Science University, Jordan		1997



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12. Publications

- 1. Batiha, I.M., , ..., and **Amjed Zraiqat**, Solvability and Dynamics of Superlinear Reaction Diffusion Problem with Integral Condition, IAENG International Journal of Applied Mathematics, 2022. (Accepted, Scoups, Q3)
- Batiha, I.M., Njadat, S.A., Batyha, R. M., Amjed Zraiqat, Dababneh, A., Momani, S., "Design Fractional-order PID Controllers for Single-Joint Robot Arm Model", International Journal of Advances in Soft Computing and its Applications, 2022, 14(2), pp. 96–114. (Accepted, Scoups, Q3)
- 3. Amer Dababneh, **Amjed Zraiqat**, Abdulkarim Farah, Hassan Al-Zoubi, Ma'Mon Abu Hammad "Numerical methods for finding periodic solutions of ordinary differential equations with strong nonlinearity", J. Math. Comput. Sci., V.11(6), 2021, Pp. 6910-6922.
- 4. Haitham Qawaqneh, Fadi Bani Ahmad, **Amjed Zraiqat** "The Effect of Using Cyber Hunt Strategy on Developing the Mathematical Academic Achievement for Jordanian Universities Students", 2021 International Conference on Information Technology (ICIT), Pp. 549-552, Publisher IEEE.
- 5. Adel Ouannas, Iqbal M Batiha, Amina-Aicha Khennaoui, **Amjed Zraiqat**, Abeer A Al-Nana " Novel Control Law for the Fractional-order Chaotic Duffing Map ", 2021 International Conference on Information Technology (ICIT), Pp. 238-241, Publisher IEEE.
- 6. Haitham Qawaqneh, Mohd Salmi Md Noorani, Hassen Aydi, **Amjed Zraiqat**, Arslan Hojat Ansari " On Fixed Point Results in Partial-Metric Spaces " Journal of Function Spaces, 2021.
- 7. Abdulkarim Farah, Amer Dababneh, **Amjed Zraiqat** "On Non-Parametric Criteria for Random Communication and Processes Relationship" International journal of advanced Science and Engineering, V.7(2), Pp.1675-1690, 2020
- 8. Hamadneh, Tareq, **Amjed Zraiqat**, Hassan Al-Zoubi, and Mohammed Elbes. "Sufficient Conditions and Bounding Properties for Control Functions Using Bernstein Expansion." Applied Mathematics & Information Sciences 14, Pp. 1-9 (2020).
- Amer Dababneh, B Sami, Ma'mon Abu Hammad, Amjed Zraiqat "A new impulsive sequential multi-orders fractional differential equation with boundary conditions" V.10(6), Pages:2871-2890 - J. Math. Comput. Sci., 2020
- 10. Amjed Zraiqat, Tareq Hamadneh "Fast Optimization and Properties of Nonlinear Polynomial Functions Using Bernstein Method" RUDN University (Russia) and Institute Denis Poisson (France), the International Conference "Singular Problems, Blow-up and Regimes with Peaking in Nonlinear PDEs". Moscow, Nov. 10-14, 2019.



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- Amjed Zraiqat, S.K. Paikray, Hemen Dutta "A Certain Class of Deferred Weighted Statistical B-Summability Involving (p; q)-Integers and Analogous Approximation Theorems" Filomat 33:5 (2019), 1425–1444, <u>https://doi.org/10.2298/FIL1905425Z</u>, Published by Faculty of Sciences and Mathematics, University of Nis, Serbia, Available at: <u>http://www.pmf.ni.ac.rs/filomat</u>.
- 12. **Amjed Zraiqat**, "Inclusion and Equivalence Relations between Absolute Nörlund and Absolute Weighted Mean Summability Methods". Bol. Soc. Paran. Mat., will be published in (3s.) v. 37 4 (2019): Pp.103–117.
- 13. Amer Dababneh, Bilal Albarmawi, **Amjed Zraiqat**, Tareq Hamadneh, "Conformable Fractional Bernoulli Differential Equation with Applications", 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), 2019, Pp. 421-424
- 14. M. Abu-Zreig, Amjed Zraiqat, M. A. M. Abd Elbasit "SEEPAGE RATE FROM CERAMIC PITCHERS UNDER POSITIVE AND NEGATIVE HYDRAULIC HEAD". Applied Engineering in Agriculture, Vol. 34(4): 707-714 © 2018 American Society of Agricultural and Biological Engineers ISSN 0883-8542 https://doi.org/10.13031/aea.12813
- 15. **Amjed Zraiqat**, "BOUBAKER PIVOTAL ITERATION SCHEME (BPIS)". Italian journal of pure and applied mathematics №37–2017, Pp.127-138.
- Amjed Zraiqat, Laith K. Al-Hwawcha, "On Exact Solutions of Second Order Nonlinear Ordinary Differential Equations". Applied Mathematics Vol.6 No.6 pp.953-957, June 2, 2015
- 17. **Amjed Zraiqat**, "ABSOLUTE TRANSLATIVITY OF GENERALIZED NÖRLUND MEAN" Proceedings of the 2nd International Conference on Computing, Mathematics and Statistics (iCMS2015), chapter 18, pp.175-186, 4-5 November 2015, Langkawi Island, Kedah Malaysia.
- Amjed Zraiqat, "Equivalence Relations Between Absolute Riezs and the Product of Two Absolute Riezs Summability Methods" Proceedings of the World Congress on Engineering and Computer Science 2014 Vol II, pp. 893-898, WCECS 2014, 22-24 October, 2014, San Francisco, USA
- Amjed Zraiqat, Amer Dababneh, "Study of Development of Cracks under Compressive Stresses". Applied Mathematical Sciences, Vol. 7, 2013, no. 33, pp. 1611 – 1622, HIKARI Ltd, <u>www.m-hikari.com</u>.
- 20. **Amjed Zraiqat**, Azmi K. Al-Madi, "On Translativity of the Product of Riesz Nörlund Summability Methods". Applied Mathematical Sciences, Vol. 7, 2013, no. 33,



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pp. 1601 - 1610, HIKARI Ltd, www.m-hikari.com.

- 21. **Abo-Izreik Amjed**, "Estimation of Cracks Behavior in Rock's Massif with Underground Structures" Journal of Applied Sciences Research, Vol.7 (3) 2011, pp.340-345, <u>www.aensiweb.com</u>.
- 22. **Abo-Izreik Amjed**, One Approach to Assessing the Fragility of the (Crack Resistance) Rock Formations. European Journal of Scientific Research, Vol.51, No.2 (2011), pp.254-259, <u>http://www.eurojournals.com/ejsr.htm</u>.
- 23. **Abo-Izreik Amjed**, "Probabilistic Model of Brittle Fracture of Geomaterials". Advances in Natural and Applied Sciences, 4(2): pp. 117-123, 2010, <u>www.aensiweb.com</u>.
- 24. Majed M Abu-Zreig, Yukuo Abe, Hiroko Isoda, **Amjed Abo-Izreik** "Land Drainage with Evaporation Drainage Method". American Society of Agricultural and Biological Engineers, St. Joseph, Michigan www.asabe.org, 2007 ASABE Annual Meeting.
- 25. **Abo-Izreik Amjed**, Azmi K. Almadi "On translativity of absolute Rogosinsky-Bernstein methods of different order" ISSN 0321-0367. Bulletin of the Belarusian State University. Ser. 1, Physics. Math's. Computer science. 2006. № 1. p. 101-105.
- 26. M. Zhuravkov, S. Pavlov and **Abo-Izreik Amjed** "APPLIED THEORY OF CRACKS BEHAVIOR IN ROCK MASSIFS". European Congress on Computational Methods in Applied Sciences and Engineering, Finland, Jyväskylä, july,2004.
- 27. I.S. Nevelson, M.A. Zhuravkov, O.V. Stagorova, Abo-Izreik Amjed "Computer modeling of Geomechanical processes. Part 2. Investigation a hole state in potash rocks Massif // "The Surveying bulletin" (Moscow). N4. 2003. P.57-60
 In Russian (Невельсон И.С., Журавков М.А., Стагурова О.В., Абу-Изрейк Амджад "Компьютерное моделирование геомеханических процессов. Ч.2. Исследование состояния скважины в нарушенном массиве соляных пород // Маркшейдерский вестник. №4. 2003. С. 57-60.)
- M.A. Zhuravkov, Abo-Izreik Amjed "Computer modeling of geomechanical processes. Part1.General position" // "The Surveying bulletin" (Moscow). N1. 2003. P.61-66. In Russian (Журавков М.А., Абу-Изрейк Амджад "Компьютерное моделирование геомеханических процессов. Ч.1. Общие положения // Маркшейдерский вестник. №1. 2003. С.61-66.)
- 29. **Abo-Izreik Amjed**, "Solution of the nonlinear geomechanics problems by the method of Green's quasifunction Part 1. Take into consideration the nonlinear effects and small disturbance of the mechanical characteristics of mining rocks". Journal of Inst. Of Math. & Comp. Sci. (Math. Ser, India) Vol. 14, No. 3(2001)283-288.



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- 30. Snezhana Drozd and **Abo-Izreik Amjed**, "Prediction of Phisico-Mecanical Properties and Behavior of the Pipe Line Materials in Oil Industry". Second Belarusian Congress on Theoretical Mechanics "Mechanics-99", June 28-30, Minsk-1999, Pp. 76-77.
- 31. M.A. Zhuravkov, M.D. Martynenko, **Abo-Izreik Amjed** "Problem formulation of the model problems of geomechanics". Matrix of fundamental solutions and integral representations for the problems in terms of stresses". Izv. Universities. Mining Journal. № 1-2, 1997. Pp.44-50.
- 32. M.D. Martynenko, **Abo-Izreik Amjed**. "The Problem in stresses as a Boundary Problem for a system of Beltrami-Michell Equations" // Ukrainian conference (modeling and study of the system stability) Kiev-1995, P.82.
- 33. M.D. Martynenko, Abo-Izreik Amjed, "Integral representations of Smooth Solutions for a system of Beltrami-Michell Equations". All-Ukrainian scientific conference (Development and application of mathematical methods in scientific and engineering investigations) L'VOV 1995, P. 35-36.
- Kazakeivich V.A., Medvedev D.G., Sklyar O.N., Ushchenko D.P., Abo-Izreik Amjed. "Method of integral equations in solution of some problems of elasticity theory". Belarus congress on theoretical and applied mechanics 'Mechanics-95', Minsk 1995, P. 317-318.
- 35. Martynenko M.D., Yushchenko D.P., **Abo-Izreik Amjed**, "Elastopotential method for boundary value problems of elasticity theory in terms of stresses". Belarus congress on theoretical and applied mechanics 'mechanics-95' Minsk-1995, P. 343-344.
- 36. **Abo-Izreik Amjed**, (1995), "problem of Elasticity Theory in Stress". Journal of Belarus Ac. Sc., Series: Phys. Tech. Sc., no.4, PP: 33-34.
- 37. Martynenko, M.D. and **Abo-Izreik Amjed**, and Youshchenko, D.P. (1995). "The Problem of Elasticity Theory in Stress as a Boundary Value Problem of a system of Beltrami-Michell Equations". Journal of Belarus Ac. Sci., Series: Phys.-Tech. Sc., no.4, PP: 29-33.
- 38. Martynenko, M.D. and **Abo-Izreik Amjed**, (1995). "Singular Solution for the Elasticity Theory in Stress". Journal of Belarus Ac. Sci., Series: Phys.-Tech. Sc., no.4, PP: 25-28.
- 39. M.D. Martynenko, **Abo-Izreik Amjed**. "Some features of a system of the Beltrami-Michell Equations"// International Mathematical Conference to the 25th Anniversary Science the foundation of Gomel University. Collected Abstracts, Part I, Gomel University Publishers, 1994, P. 150.



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40. **Abo-Izreik Amjed**, "On One Over determined system of partial differential equations of mathematical physics". Second Jordan mathematical conference, Mu'tah University, Jordan 1994.

*Please note that: My family name was Abo-Izreik