**Mohammed Ali**

Associate Professor

Department of Mathematics and Statistics

Jordan University of Science and Technology

Irbid, Jordan

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**PERSONAL INFORMATION**

* Date and Place of birth: 11/ 11 / 1979 Jordan
* Gender: Male
* Nationality**:** Canadian and Jordanian
* Marital Status: Married

**ACADEMIC QUALIFICATION:**

**Ph.D. in Mathematics,** Memorial University, St. John's, NL, Canada, May 2009

* Concentration: Geometry and Harmonic Analysis/ Applied Analysis
* Dissertation: Best Constants in Higher-Order Sobolev Inequalities on Compact Riemannian Manifolds
* Advisor: Prof. Jie Xiao

**M. Sc. in Mathematics,** Yarmouk University, Irbid, Jordan, June 2004

* Concentration: Mathematical Analysis, Harmonic Analysis.
* Dissertation: *Lp* Estimates for a Singular Integral Operator with a Rough Kernel on Product Spaces.
* Advisor: Dr. Hussain Al-Qassem

**B.Sc. in Mathematics,** Yarmouk University, Irbid, Jordan, June 2001

**LANGUAGES:**

* Arabic: fluent in both written and spoken
* English: excellent in both written and spoken

**PROFESSIONAL EXPERIENCE:**

**Associate Professor**, October 2015 – Present

**Assistant Professor**, September 2010 – October 2015

* Jordan University of Science and Technology, Irbid, Jordan
* Courses: Pre-Calculus, Calculus I/II/III, Linear Algebra I, Logic and Set Theory, Discrete Mathematics, Ordinary Differential Equations, Introduction to Partial Differential Equations, Special Topics in Applied Mathematics, Real Analysis I/II, Research in Applied Mathematics, Independent Studies, and Measure Theory.

**Instructor**, May 2008 - April 2009

* Memorial University, St. John's, NL, Canada
* Courses: Calculus I and Calculus II

**Teaching Assistant,** September 2005 - May 2009

* Memorial University, St. John's, NL, Canada
* Teaching assistant: Leading weakly laboratory/tutorial sessions for Calculus I/II, and real analysis I/II
* Marking assignments for real analysis I/II and complex analysis I
* Invigilating Exams

**Teaching Assistant**, January 2002 - June 2003

* Yarmouk University, Irbid, Jordan
* Teaching assistant: Leading tutorial sessions for Calculus I/II/III, Linear Algebra, Discrete Mathematics, and Real Analysis I/II
* Invigilating Exams

**High School Teacher,** August 2001 - August 2005

* Ministry of education, Irbid, Jordan.

**Administration**

* Chairman, Department of mathematics and Statistics- Jordan University of Science and Technology**,** 2018-2020

**Committees at Jordan University of Science and Technology**

* Development and Planning Committee
* Scholarship and Recruitment Committee
* Curriculum committee
* Social Committee
* Promotion Committee
* Research Committee
* Graduate studies Committee
* ABET Accreditation Committee

**COMPUTER SKILLS:**

* Mathematical Software: Mathematica, Matlab
* Languages Programming: Fortran, Basic, C++
* Typesetting Software: Scientific Work Place, Latex, Mat lab, Mathematica, and Microsoft Word

**HONOURS AND AWARDS:**

* Ph.D. Scholarship, Memorial University, Canada, 2005-2009
* Master Scholarship, Mathematics Department, Yarmouk University, Jordan, 2002-2003

**ACADEMIC SESSIONS:**

* Graduate Program in Teaching (GPT), Memorial University, St. John's, Canada, 2006
* Teaching Opportunities for Graduate Assistants (TOGA 2), Memorial University, St. John's, Canada, 2008.
* Statistical Package for Social Sciences, Jordan University of Science and Technology, Irbid Jordan, 2011
* Testing and Evaluation, Jordan University of Science and Technology, Irbid Jordan, 2012
* Development of Curriculum and Study plans, Jordan University of Science and Technology, Irbid Jordan, 2017
* Scientific research: methods and procedures , Jordan University of Science and Technology, Irbid Jordan, 2018

**CONFERENCES:**

* **Aldrich Conference**, March 2006, Memorial University, St. John's, NL, Canada
* **Workshop on Recent Advances in Operator Theory and Function Theory**, January 2008, University of Toronto, Toronto, Canada
* **International Conference on Applied Analysis and Mathematical Modeling**, June 2013, Yildiz Technical University, Istanbul, Turkey
* **International Conference on Recent Advances in Pure and Applied Mathematics,** November 2014, Antalya, Turkey.
* **International Conference on Applied Analysis and Mathematical Modeling**, June 2015, Yildiz Technical University, Istanbul, Turkey

**RESEARCH GUIDANCE:**

* Eight candidates have been awarded M.Sc. degrees under my supervision
* **Ahmed Al-Zoubi***, A combined of Laplace transform and Adomian decomposition method to solve partial differential equation arising in applied physics*, November 2012.
* **Ebtihaj Janaedeh***, Marcinkiewicz integrals on product spaces and extrapolation,* December 2014.
* **Eman Abo-Shgair,** *On certain estimates for parabolic Marcinkiewicz integral and extrapolation,* April 2015
* **Ammera Al-Senjlawi,** *Boundedness of Marcinkiewicz integrals on product spaces and extrapolation,* November 2015
* **Doaa Obeidat***, General norm inequalities for bounded linear operators in Hilbert spaces,* July 2016
* **Lubna Al-zaareer**, *Boundedness of certain class of maximal functions along surfaces,* December 2016
* **Omar Al-Mohammed**, *Boundedness of a class of rough maximal functions*, *July 2018*
* **Mousa Al-Riyashi**, *Lp estimates for maximal functions along surfaces of revolution on product spaces*, July 2018
* Three candidates have been awarded M.Sc. degree under my co-supervision
* **Linda Istaiti***, Generalizations of Ideal-based zero-divisor graphs of commutative rings,* May 2012
* **Rawan Ababneh**, *Numerical Radius Inequalities for Matrices of Bounded Linear Operators in Hilbert Spaces,* December 2016
* **Nazzal Alnimer***, On rough maximal operators with mixed homogeneity along surfaces of revolution,* January 2019.
* Member of fifteen defense exam committees for Master theses in Mathematics

**REFEREEING AND REVIEWING:**

Refereed peer reviewed publications in international journals including for:

* Journal of inequalities and applications
* International Journal of Nonlinear Science
* Jourdan Journal of mathematics and Statistics
* Asian Journal of Mathematics and Computer Research
* Abstract and applied analysis

**CURRENT RESEARCH INTERESTS:**

* Best constants in Sobolev inequalities on Riemannian manifolds
* Boundedness for singular/Marcinkiewicz/maximal integral operators
* Fractional Calculus and its applications in physics and engineering problems
* Solitary wave solutions for nonlinear Partial Differential Equations

**Google Scolar:** [**https://scholar.google.com/citations?user=jvpBA7MAAAAJ&hl=en**](https://scholar.google.com/citations?user=jvpBA7MAAAAJ&hl=en)

**Research Gate:** [**https://www.researchgate.net/profile/Mohammed\_Ali53**](https://www.researchgate.net/profile/Mohammed_Ali53)

**LIST OF PUBLICATIONS:**

1. H. Al-Qassem and **M. Ali**, *Lp boundedness for singular integral operators with L(log+L)2 kernels on product spaces*, **Kyungpook Math. J**. **46 (2006) 377-387**
2. H. Al-Qassem and **M. Ali**, *Lp estimates for a singular integral operator with a rough kernel on product spaces*, **Abhath Al-Yarmouk, Basic Science and Engineering Refereed Research Journal**, **15 (2006) 119-139**
3. H. Al-Qassem and **M. Ali**, *Singular integrals related to homogeneous mapping with rough kernels on product spaces*, **Tamkang Journal of Math., 39 (2008) 165-176**
4. **M. Ali**, *Best constants in second-order Sobolev inequalities on compact Riemannian manifolds in the presence of symmetries*, **Turk J. Math., 36 (2012), No. 4, 601-612**
5. **M. Ali**, M. Alquran and M. Mohammad, *Solitonic solutions for homogeneous KdV systems by Homotopy analysis method*, **J. of Appl. Math, (2012), Article ID 569098, 10 pages.**
6. M. Alquran, **M. Ali**, and K. Al Khaled, *Solitary wave solutions to shallow water waves arising in fluid dynamics*, **Nonlinear Studies, 19 (2012), No. 4, 555-562**
7. M. Alquran, K. Al Khaled, **M. Ali**, and A. Ta’any, *The combined Laplace Transform- Differential Transform Method for Solving Linear Non-Homogeneous PDEs*. **J. Math. Comput. Sci., 2 (2012), No. 3, 690-701**
8. R. Abu-Dawwas and **M. Ali***, Comultiplication modules over strongly graded rings*. **Int. J of Pure and Appl. Math., 81 (2012), No. 5, 693-699**
9. M. Al-Dolat and **M. Ali***, General Numerical Radius Inequalities,* **Studies in Math. Sci., 6 (2013), No. 1, 1-7**
10. M. Al-Dolat and M. **Ali***, Norm Inequalities for Sequences of Bounded Linear Operators in Hilbert Spaces***, Int. J. of Pure and Appl. Math. 82 (2013), No. 4, 573-580**
11. M. Al-Dolat, **M. Ali** and I. Abu-Irwaq*, Numerical Radius Inequalities for the Cartesian Decomposition of Bounded Linear Operators in Hilbert Spaces,* **J. Math. Comput. Sci., 3 (2013), No. 4, 985-992**
12. **M. Ali,** *Lp Estimates for Marcinkiewicz integral operators and extrapolation***, J. ineq. Appl., (2014). doi: 10.1186/1029-242X-2014-269**
13. **M. Ali,** *Lp estimates for Marcinkiewicz integrals on product spaces***, Houston J. of Math., (accepted)**
14. **M. Ali** and E. Abo-Shgair**,** *On certain estimates for parabolic Marcinkiewicz integral and extrapolation,* **Int. J. of Pure and Appl. Math., 96 (2014), No. 3, 391-405**
15. **M. Ali** and A. Al-Senjlawi**,** *Boundedness of Marcinkiewicz integrals on product spaces and extrapolation,* **Int. J. of Pure and Appl. Math., 97 (2014), No. 1, 49-66**
16. M. Al-Dolat, K. Al-Zoubi, **M. Ali**, and F. Bani-Ahmad***,*** *General numerical radius inequalities for matrices of operators,* **Open Mathematics, (2016), Doi: 10.1515/math-2016-0011**
17. **M. Ali** and I. Janaedeh*, Marcinkiewicz integrals on product spaces and extrapolation* **Global J. Pure appl. Math., 12 (2016), No. 2, 1451-1463**
18. **M. Ali***, Parabolic Marcinkiewicz integrals on product spaces,* **Bull. Iran. Math. Soc. 42 (6), (2016), 1547-1557**
19. **M. Ali** and M. Al-Dolat**,** *Parabolic Marcinkiewicz integrals on product spaces and extrapolation,* **Open Mathematics, (2016), Doi: 10.1515/math-2016-0061**
20. **M. Ali**, I. Jaradat and M. Alquran**,** *New computational method for solving fractional Riccati equation,* **J. Math. Comp. Sci., 17 (2017), 106-114**
21. **M. Ali**, M. Al-Dolat and D. Obeidat**,** *General Norm inequalities for bounded linear operators in Hilbert,* **Commun. Optm. Theory, (2017), Doi.org:10.23952/cot.2017.20**
22. M. Alquran, K. Alkhaled, **M. Ali**, and O. Abu Orqub**,** *Bifurcations of the time-fractional generalized coupled Hirota-Satsuma KdV system,* **Waves Wavlets Fractal Adv. Anal. Doi 10.1515/wwfaa-2017-0003**
23. **M. Ali**, M. Al-Dolat and H. Obeidat***,*** *On certain estimates for the Littlewood-Paley operator along surfaces of revolution***, J. Math. Anal., 8(3) (2017), 69-79**
24. H. Al-Bataineh and **M. Ali,** *Lp bounds for* *Marcinkiewicz integrals* along surfaces and *extrapolation,* **Int. J. of Pure and Appl. Math., 115 (4) (2017), 777-786**
25. M. Al-Dolat, **M. Ali**, I. Jaradat, and K. Alzoubi**,** *On the boundedness of a certain class of maximal functions on product spaces and extrapolation***, Anal. Math.Phys Doi 10.1007/s13324-018-0208-xi**
26. I. Jaradat, M. Alquran and **M. Ali,** *A numerical study on weak-dissipative two-mode perturbed Burgers' and Ostrovsky models: right-left moving waves***, Eur. Phys. J. Plus (2018) 133:164. Doi 10.1140/epjp/i2018-12026-x**
27. H. Al-Bataineh and **M. Ali,** *Boundedness of maximal functions with mixed homogeneity,* **Int. J. of Pure and Appl. Math., 119 (4) (2018), 705-716**
28. **M. Ali** and O. Al-Mohammed*, Boundedness of a class of rough maximal functions***, J. Ineq. Appl., (2018). doi: 10.1186/1029-242X-2014-269**
29. M. Alshorman, N. Zamri, **M. Ali**, and A. Albzeirat**,**  *New Implementation of Residual Power Series for Solving Fuzzy Fractional Riccati Equation,* **J. Modeling and Optimization., 10 (2) (2018), 81-87**
30. **M. Ali**, M. Alquran and I. Jaradat, *Asymptotic-sequentially solution style for the generalized Caputo time-fractional Newell-Whitehead-Segel system,* **Advances in Difference equations, (2018). doi.org/10.1186/s13662-019-2021-8**
31. A. Darweesh, **M. Ali** and N. Alnimer**,** *Parabolic maximal operators along surfaces of revolution with rough kernels,* **Mediterranean J. Math., (2019), doi.org/10.1007/s00009-019-1436-5**
32. **M. Ali**, M. Alquran. I. Jaradat, and D. Baleanu, *Stationary wave solutions for new developed two-waves' fifth-order Korteweg-de Vries equation,* **Advances in Difference equations. , (2019). doi.org/10.1186/s13662-019-2157-6**
33. **M. Ali** and O. Al-Refai, *Boundedness of Generalized Parametric Marcinkiewicz Integrals Associated to Surfaces,* **Mathematics, (2019). doi:10.3390/math7100886***.*
34. **M. Ali** and M. Reyyashi, *Lp* estimates for maximal functions along surfaces of revolution on product spaces*,* **Open Mathematics, (2019), Doi: 10.1515/math-2019-0118.**
35. A. Darweesh and **M. Ali** , *Generalized Parabolic Marcinkiewicz Integral Operators Related to Surfaces of Revolution,* **Mathematics, (2019), 7, 1200, Doi:10.3390/math7121200.**
36. O. Al-Refaiand **M. Ali,** *General coefficient estimates for bi-univalent functions; new approach***, Turk J. Math., In Press, doi:10.3906/mat-1910-100.**

**RESEARCH SUBMITTED AND IN PREPARATION:**

1. Best constants in higher-order Sobolev inequalities on compact Riemannian Manifolds
2. Boundedness of maximal operators with mixed homogeneity associated to surfaces of revolution
3. On generalized parabolic Marcinkiewicz integrals associated to polynomials compound curves with Rough kernels
4. Rough maximal operators with mixed homogeneity on product domains
5. The dynamics of new dual-mode Kawahara equation: Interaction of dual-waves solutions and graphical analysis
6. Development of spreading two-waves motion for a family of two-mode nonlinear equations

**VOLUNTEER EXPERIENCE:**

* + - Memorial University*,* Let's Talk Science Partnership Program (LTSPP), visiting schools for mathematics demonstrations, 2008
    - Yarmouk University, Counselling and assisting junior students, 1999- 2001 and 2002-2004
    - Tutoring some math courses for free to high school students in our town, Jordan, 2014-2017.
    - Visitingsome schools in Jordan for mathematics demonstrations, 2018.

**REFERENCES:**

**Jie Xiao**, Professor

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**Hussain Al-Qassem**, Professor

Department of Mathematics and Physics

Qatar University, Doha, Qatar

*Email:* [husseink@qu.edu.qa](mailto:husseink@qu.edu.qa)

**Qutaibeh Khatatbeh**, Professor

Department of Mathematics and Statistics

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**Danny Dyer**, Professor

Department of Mathematics and Statistics

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