

# Mufida Mohamed A. Hmaida

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## Contact Information

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## Research Interests

Representation theory of finite groups and finite dimensional algebras, cellular algebras, diagrams algebra, number theory, integral equations, algebraic geometry.

## Education

### University Of Leeds, Leeds, UK

- Ph.D. in Mathematics. (April, 2013- January, 2017)  
Dissertation Topic: "Representation Theory Of Algebras Related To The Bubble Algebra"  
Advisors: Prof. Alison Parker, Prof. Paul Martin

### Misurata University, Misurata, Libya

- M.S. in Mathematics, Faculty of Science. (September, 2005- July, 2009)
- B.A. in Mathematics, Faculty of Science. (September, 2001- July, 2005)

## Academic Experience

*Demonstrator:* Mathematics Department, Faculty of Science, Misurata University, Misurata, Libya January, 2006-July, 2009

*Assistant Lecturer:* Mathematics Department, Faculty of Science, Misurata University, Misurata, Libya October, 2009-October, 2012  
Duties at various times have included office hours and teaching some modules as Calculus, linear Algebra, Number Theory, Numerical and Complex Analysis, Differential and Integrable Equations and Abstract algebra.

*Head master of Mathematics Department,* Faculty of Science, Misurata University, Misurata, Libya April-October 2012

*PhD. Student* , University of Leeds, Leeds, UK April, 2013- January, 2017  
Duties have included marking homework assignments and exams, and doing some tutorials

*Lecturer:* Mathematics Department, Faculty of Science, Misurata University, Misurata, Libya May, 2017-2019  
Duties at various times have included office hours and teaching some modules as Complex Analysis, Numerical methods, Calculus and Abstract algebra.

*Cooperating Lecturer:* General Department, Faculty of Economics and Political Science, Misurata University, Misurata, Libya Fall 2018- Present

*Editor:* Science Journal, Faculty of Science, Misurata University, Libya 2019-Present

*Managing Editor:* Science Journal, Faculty of Science, Misurata University Jan, 2022-Present

*Assistant Professor:* Mathematics Department, Faculty of Science, Misurata University, Misurata, Libya April, 2019-Present

## Publications

### Published

- Review Of Calculating Invariant Rings Of Symmetric Groups, *Journal of Academic Research (Applied Sciences), The Libyan Academy, Misurata*, Vol. 17(Jan/2021), 53 – 57.
- A cellular algebra with specific decomposition of the unity, *Communications in Algebra, Taylor and Francis*, Issue 48:9(2020), 3962 – 3972, DOI: 10.1080/00927872.2020.1753059.
- The Bubble Algebras at Roots of Unity, *Journal of Academic Research, The Libyan Academy, Misurata*, Issue 13(2019), 15 – 26.
- A Comparison of Four Techniques For Solving Non-Singular Fredholm Integral Equations, *Journal of Science, Misurata university*, Vol. 7 (2018), 31 – 34.
- Numerical Solutions of Non-linear Fredholm Integral equations of the Second Type, *The Second Annual Conference on Theories and Applications of Basic and Biosciences, Misurata university*(2018), 562 – 566.
- Special Elements Of The Bubble Algebra, *The First Annual Conference on Theories and Applications of Basic and Biosciences, Misurata university*(2017), 338 – 344.
- The Approximate Solutions of Fredholm Integral Equations of the Second Kind, *The third national conference for basic sciences, Al Jabel Algharbi university, Libya*(2009).

### In-Progress

- Curve Fitting of Archimedean Spirals, with Dr. Mai Alfahad, 10 pages, submitted
- Basics of Abstract algebra, textbook in Arabic.
- The multi-color partition algebras revisited.

## Conferences/ Workshops

- The Forth Academic Conference on Economics and Business Studies(The Business Sector in Light of the COVID-19 Pandemic), Misurata university, (11/12/2021).
- The Fifth Annual Conference on Theories and Applications of Basic and Biosciences, Misurata university, (04/09/2021).
- Women in Combinatorics and Representation Theory, virtual workshop, University of California, Riverside, 15<sup>th</sup> – 16<sup>th</sup> May 2021.
- Poster Day For The Academic Year 2020/2021, Curve Fitting of Archimedean Spirals, with Dr. Mai Alfahad, Kuwait University, (21/03/2021).
- The Second Annual Conference on Theories and Applications of Basic and Biosciences, Misurata university, (01/09/2018).
- The First Annual Conference on Theories and Applications of Basic and Biosciences, Misurata university, (09/09/2017).
- Representation Theory and Physics, university of Leeds, 18<sup>th</sup> – 22<sup>th</sup> July 2016.
- Representations of Algebraic groups, university of York, UK, 13<sup>th</sup> – 15<sup>th</sup> July 2016.
- Modelling Topological Phases of Matter Workshop, university of Leeds, 5<sup>th</sup> – 8<sup>th</sup> July 2016.
- Birmingham young mathematician colloquium, university of Birmingham (13/05/2015).
- The 43<sup>rd</sup> ARTIN meeting ” Young researchers meeting”, university of Leeds, 6<sup>th</sup> – 7<sup>th</sup> March 2015.
- Mirror Symmetry and Cluster Algebras Workshop, University of Leeds, 11<sup>th</sup> – 13<sup>th</sup> September 2013.
- Quantum Computing: a Quantum Group Approach, mini workshop, University of Leeds, 1<sup>st</sup> – 2<sup>nd</sup> July 2013.
- The 32<sup>nd</sup> Mathematics Teachers and Advisers Conference, University of Leeds, 25/06/2013.
- School in Dynamical systems, University of Tripoli, Libya, 23/11 – 1/12 2010.

- The third national conference for basic sciences, Al Jabl Algharbi university, Gharyan, Libya 25<sup>th</sup> – 27<sup>th</sup> April 2009.

**Additional Skills**

- Languages: Arabic(native), English(fluent).
- Programming: WxMaxima(advanced), Matlab(intermediate), L<sup>A</sup>T<sub>E</sub>X(advanced), Common Windows and Presentation Software.

**References**

Prof. William Crawley-Boevey(University of Leeds)	W.Crawley-Boevey@leeds.ac.uk
Prof. Robert Marsh(University of Leeds)	R.J.Marsh@leeds.ac.uk
Prof. Paul Martin(University of Leeds)	P.P.Martin@leeds.ac.uk
Dr. Rowena Paget(University of Kent)	R.E.Paget@kent.ac.uk
Prof. Alison Parker(University of Leeds)	A.E.Parker@leeds.ac.uk
Dr. Shona Yu(Western Sydney University)	S.Yu@westernsydney.edu.au