

Maram Alossaimi  
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## Education

🎓 The [University of Sheffield](#), United Kingdom  
2018–2022 | [PhD's degree](#)

Our research classifies a special class of the Poisson algebras  $A = K[t][x, y]$ , [Oh, 2006]. The Poisson polynomial algebra  $A$  is in two variables  $x$  and  $y$  with coefficients in the Poisson polynomial algebra  $K[t]$ . We constructed this class of Poisson algebras, over an algebraically closed field  $K$  of characteristic zero. The class consists of three main classes and each of them has several subclasses. We are interested in the Poisson spectra, maximal and minimal Poisson prime ideals of Poisson algebras  $A$ . We classified the Poisson prime ideals for Poisson algebras that belong to some subclasses in order to study some properties of their Poisson algebras, Poisson enveloping algebras and some simple finite dimensional Poisson  $A$ -modules. The results, i.e. the containments of Poisson prime ideals are described in diagrams. This research is presented in two posters (Poisson Algebras I) and (Poisson Algebras II). I have participated with this research in several conferences. This work has been done under the supervision of [Prof. Vladimir Bavula](#).

🎓 The [University of Manchester](#), United Kingdom  
2016–2017 | [Master's degree in Pure Mathematics and Mathematical Logic](#)

Modules I took included Group Theory, [Set Theory](#), [Galois Theory](#), [Noncommutativ Algebra](#) and [Lie Algebras](#). I did a short project in the Mathieu group  $M_{24}$  and this work was done under the supervision of Prof. Peter Rowley. In my final term, I wrote my dissertation, classified some simple finite groups, in particular, the Leech Lattice and Conway groups and this work was done under the supervision of [Prof. Peter Rowley](#).

🎓 The [University of King Saud](#), Saudi Arabia  
2008–2012 | [Bachelor's degree in Mathematics](#)

Modules I took included Integral Calculus, Foundations of Mathematics, Computational Mathematics, Differential and Integral Calculus, Vector Calculus, Linear Algebra, Numbers Theory, Introduction to Ordinary Equations, Numerical Analysis, Analysis, Group Theory, Introduction to Topology, History of Mathematics, Rings and Fields, Introduction to Partial Differential Equations, Introduction to Graphs and Combinatorics, Real Analysis, Introduction to Differential Geometry, Complex Analysis and Analysis in Several Variables. In my final term, I wrote a short project on Topology.

## English Language qualifications

- I. I studied general English in various colleges in Manchester, UK, 2014–2015.
- II. I did a pre-sessional English course at [Manchester Metropolitan University](#), UK, 2015.
- III. I studied general English at the [University of Manchester](#), UK, 2015–2016.
- IV. I got 6 overall in IELTS exam, Manchester, 25 June 2016.
- V. I did pre-sessional English course for 20 weeks at the University of Manchester, UK, 2016.

## Participating in Conferences

- I. I presented a virtual poster with the title 'Poisson algebras' at the [British Mathematical Colloquium \(BMC\)](#) and the [British Applied Mathematics Colloquium \(BAMC\)](#) in the University of Glasgow, UK, 6–9 April 2021.
- II. I presented a virtual poster with the title 'Poisson algebras I' at the [Young Researchers in Mathematics conference](#) in the University of Bristol, UK, 7–9 June 2021.
- III. I presented a virtual poster with the title 'Poisson algebras I' at the [LMS Women in Mathematics](#) Day that was organised by the University of Strathclyde, UK, 16 June 2021.
- IV. I presented a virtual poster with the title 'Poisson algebras I' at the [Geoquant 2021, Geometry and Quantization](#) conferences in Freiburg University, Germany, 9–13 August 2021.
- V. I gave a virtual short talk with the title 'Poisson brackets and Poisson prime ideals in polynomial algebras' at the [XI International Conference of the Georgian Mathematics Union](#) in the Batumi Shota Rustaveli State University, Georgia, 23–28 August 2021.
- VI. I gave a virtual short talk with the title 'Polynomial Poisson Algebras' at the [10<sup>th</sup> International Eurasian Conference on Mathematical Sciences and applications](#) in Sakarya, Turkey, 25–27 August 2021.
- VII. I gave a virtual short talk with the title 'An Introduction in Generalized Weyl Poisson Algebras' at the [8<sup>th</sup> International Congress on Fundamental and Applied Sciences](#) in Antalya Bilim University, Turkey, 19–21 October 2021.
- VIII. I gave a virtual short talk with the title 'Poisson algebras and Iterated skew polynomial algebras' at the [First International Conference on Mathematics and Computation](#) in Rajkiya Engineering College Kannauj, India, 22–23 October 2021.
- IX. I gave a virtual short talk with the title 'Poisson algebras' at the [LMS Graduate Student Meeting](#) in the London Mathematical Society, 8 November 2021.
- X. I gave a virtual short talk with the title 'Poisson algebras and Poisson prime ideals' at the [5<sup>th</sup> International Conference on Mathematics: An Istanbul Meeting for World Mathematicians](#) in Istanbul, Turkey, 1–3 December 2021.

- XI. I gave a virtual Poster presentation with the title 'Poisson Algebras II' at the [18<sup>th</sup> Mathematics Conference for Young Researchers](#) in Japan, Hokkaido University, 1–4 March 2022.
- XII. I gave a virtual talk with the title 'the Poisson algebra and Poisson spectrum' at the [Algebra 2022](#) in Vlora, Albania, Research Institute of Science and Technology (RISAT), 9–12 June 2022.
- XIII. I gave a short virtual talk with the title 'The classification of Poisson algebra class  $A = (K[t], \alpha, \beta, c, u)$  and its spectra' at the [5<sup>th</sup> International Conference on Mathematics and Statistics \(ICoMS 2022\)](#) in Paris, France, 17–19 June 2022.
- XIV. I gave a short talk with the title 'The classification of Poisson algebra class  $A = (K[t], \alpha, \beta, c, u)$  and its spectra' at the [Early Career Researchers in Mathematics \(ECRM 2022\)](#) in the University College of London, London, UK, 21–24 June 2022.
- XV. I gave a short talk with the title 'The Poisson spectrum of the first part of the second case of classification' at the [British Early Career Mathematicians' Colloquium \(BECMC 2022\)](#) in the University of Birmingham, Birmingham, UK, 21–22 July 2022.
- XVI. I gave a short talk with the title 'The Poisson spectrum of the first part of the second case of classification' at the [11<sup>th</sup> International Eurasian Conference on Mathematical Sciences and applications](#) in Istanbul, Turkey, 29 August to 1 September 2022.
- XVII. I gave a short talk with the title 'Exact bracket in polynomial algebras' at the [11<sup>th</sup> International Eurasian Conference on Mathematical Sciences and applications](#) in Istanbul, Turkey, 29 August to 1 September 2022.

## Attending Conferences

- I. The British Mathematical Colloquium in the University of Lancaster, UK, 8–11 April 2019.
- II. The virtual British Young Mathematicians' Colloquium in the University of Birmingham, UK, 17 April 2019.
- III. The virtual [International Conference of Young Mathematicians](#) in the Institute of Mathematics of NAS of Ukraine, 3–5 June 2021.
- IV. The virtual [13<sup>th</sup> International Algebraic Conference in Ukraine](#) in Taras Shevchenko National University of Kyiv, Ukraine, 6–9 July 2021.
- V. The virtual [British Early Career Mathematicians Colloquium](#) in Birmingham University, UK, 15–16 of July 2021.
- VI. The virtual [Conference on Rings and Polynomials](#) in TU Graz, Graz, Austria, 19–24 of July 2021.
- VII. The virtual conference in celebration of the work of Bill Crawley-Boevey, 1–10 September 2021.
- VIII. The virtual [Young Algebraists' Conference](#) in EPFL, 6–10 September 2021.

- IX. The virtual Black Heroes of Mathematics Conference, 5–6 October 2021.
- X. The **Lie Theory and Poisson Geometry** Conference in the Centre International de Rencontres Mathematiques, Marseille, France, 10–14 January 2022.
- XI. The **Poisson 2022** Conference in the Institute of Mathematical Sciences in Madrid, Spain, 25–29 July 2022.

## Summer schools and Workshops

- I. The virtual **Geoquant 2021, Geometry and Quantization** in Freiburg University, 2–6 August 2021.
- II. The virtual **K-Theory and Representation Theory**, 19–23 July 2021.
- III. The virtual **finite and infinite-dimensional meeting on Lie groupoids, Poisson geometry and integrability** workshop, 16–20 August 2021.
- IV. The **power of women in deep learning** workshop in Isaac Newton Institute, Cambridge from 22–23 November 2021. Also, I presented my poster with the title 'Poisson algebras'.
- V. The virtual **Poisson 2022 Advanced School** in the Centre de Recerca Matematica, Barcelona, Spain, 18–22 July 2022.

## Attending online workshops at the University of Sheffield

- I. Effective Online Presentations, 14 Jan 2021.
- II. Coaching Stressed, 25 Jan 2021.
- III. Online Presenting, 1 June 2021.
- IV. STA Lecturing, 8 June 2021.
- V. STA Research Supervision, 23 June 2021.
- VI. STA Assessment and Feedback, 7 July 2021.
- VII. Foundation Pathway Orientation, 27 September 2021.
- IX. STA Teaching Design and Delivery, 7 October 2021.

## Awards


- I. I was awarded by the University of King Saud several times during my Bachelor's degree for my distinguish in my studies, 2009–2012.
- II. I was awarded by the **Saudi Arabia Cultural Bureau** in London for my distinguish in Master's degree, 2016–2017.


- III. I was awarded as the second winner with my virtual poster, the title 'Poisson algebra I', by the [Young Researchers in Mathematics conference](#) that was organised by the [University of Bristol](#), UK, 7–9 June 2021.
- IV. I was awarded with my virtual poster, the title 'Poisson algebra I', by [LMS Women in Mathematics](#) Day that was organised by the University of Strathclyde, UK, 16 June 2021.
- V. I was awarded with presenting my virtual short talk, the title 'Poisson algebras and Iterated skew polynomial algebras', by the [First International Conference on Mathematics and Computation](#), 22–23 October 2021.
- VI. I was awarded twice by the [Saudi Arabia Cultural Bureau](#) in London for my distinguish in PhD's degree, 2018-2022.

## Current and Future Research Interests


When I was a graduate student I was interested in Algebra, in particular Field and Ring theories, but after I did my Master's degree and I studied Non-commutative algebras and Lie algebras courses, I was keen on them. I am interested in Lie algebras and Poisson algebras. However, what I found in my journey is that Algebra, Geometry and Topology are related to each other. In my opinion, a concept can be shifted, reflected and better understood from one area to another easy and you will be able to see and understand it in more make sense. Moreover, people like Mathematics if they understand it or if Mathematics has meaning in their lives, i.e. applications in Physics. Therefore, I plan to build up my background in Geometry and Topology after I finish my PhD's degree, so then I can to do further research in Non-commutative Algebra.

## Research skills

  $\text{\LaTeX}$ . Writing in Latex.

 Time managing.

 Hard worker.

 Solving problems.

## Experience

- I. I taught at the University of Imam Mohammad Ibn Saud, 2013–2014 and 2017–2018.
- II. I gave tutorial classes [MAS003](#), [MAS004](#), [MAS114](#) and [MAS156](#) at the University of Sheffield, 2019–2022.
- III. I marked [MAS004](#), [MAS114](#) and [MAS211](#) at the University of Sheffield, 2019–2022.
- IV. I did [review](#) for a paper at the [5<sup>th</sup> International Conference on Mathematics and Statistics \(ICoMS 2022\)](#) in Paris, France, 17–19 June 2022.

## Employment

I am a lecturer in Mathematics and Statistics department, Science college at the [University of Imam Mohammad Ibn Saud](#) in Saudi Arabia since 2014.

## Scholarships/Sponsorships

- I. I got a scholarship from the University of Imam Mohammad Ibn Saud in Saudi Arabia to study my Master's degree at the University of Manchester, UK, 2016–2017.
- II. I have gotten a scholarship from the University of Imam Mohammad Ibn Saud in Saudi Arabia to study my PhD at the University of Sheffield, UK, 2018–2022.





## Membership

- I. I am a member of the [Hong Kong Chemical, Biological and Environmental Engineering Society](#) (HKCBEES) since 15 October 2021.
- II. I am a member of the [Society for Industrial and applied mathematics](#) (SIAM) 2021–2022.
- III. I am a member of the [Institute of Mathematics and its Applications](#) from October 2021 to January 2022.
- IV. I am a member of the [London Mathematical Society](#) (LMS) from November 2021 to November 2022.
- V. I am a member of scientific committee of [An Istanbul Meeting for World Mathematicians](#) since June 2022.

## Future plan


I am going back to teach and use my experience to help education development at the university of Imam Mohammad Ibn Saud. I am going to focus on publishing papers, organise and involve in Mathematics conferences in/out of Saudi Arabia. The main aim in my career will be improving knowledge and delivering teaching in high quality of Mathematics in the Saudi Arabia education. Also, I would like to improve my formal Arabic Language and know more about the history of Languages.

## Hobbies and Interests

-  Travelling.
-  Photography.
-  Reading books.
-  Drawing.

 Exercise.

 Shopping

 Puzzles.

 Languages.

## Contact

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	Github	<a href="https://github.com/MaramAlossaimi">https://github.com/MaramAlossaimi</a>