

# Curriculum Vitae

## Personal Information

<b>Name:</b>	Maha Alammari
<b>Nationality:</b>	Saudi
<b>E-mail:</b>	<a href="mailto:malammari@ksu.edu.sa">malammari@ksu.edu.sa</a>
<b>Office Phone Number:</b>	00966118055493

## Profile Overview

<ul style="list-style-type: none"><li>• Self-motivated, hardworking and goal-oriented with flexibility.</li></ul>
<ul style="list-style-type: none"><li>• Adaptable to the new environment, devoted, determined and cooperative</li></ul>
<ul style="list-style-type: none"><li>• Understanding of education/ administration with quantitative and conceptual abilities; insights and team approach to drive organizational improvements and implementation of the best practices</li></ul>

## Credentials

<ul style="list-style-type: none"><li>• PhD: Doctor of Philosophy in Applied Numerical Computing, The University of Manchester, Manchester, United Kingdom, 2011</li></ul>
<ul style="list-style-type: none"><li>• MSc: Master of Science in Mathematics-Functional Analysis, King Saud University, Riyadh, Saudi Arabia with grade 4.94 out of 5, 2006</li></ul>
<ul style="list-style-type: none"><li>• BSc: Bachelor of Science in Mathematics, King Saud University, Riyadh, Saudi Arabia with an Excellent grade 4.99 out of 5- and first-class honor, 2003</li></ul>
<ul style="list-style-type: none"><li>• High School: Al-Abnaa' School, Riyadh, Saudi Arabia with an excellent grade 99.9 %, 1999</li></ul>
<ul style="list-style-type: none"><li>• Languages: Arabic and English</li></ul>

## Prizes

<ul style="list-style-type: none"><li>• Excellence Award in Academic Advising- College of Science, 2024</li></ul>
<ul style="list-style-type: none"><li>• Teaching Excellence Award in College of Science, 2019</li></ul>
<ul style="list-style-type: none"><li>• 2010-2011, Two annual awards for outstanding scholarship students from the Saudi Cultural Bureau in the United Kingdom and Ireland, 2010-2011</li></ul>
<ul style="list-style-type: none"><li>• Custodian of the Two Holy Mosques Award for Scientific Excellence in Saudi Universities, 2003</li></ul>
<ul style="list-style-type: none"><li>• Second in Riyadh Region in High School Exams, Saudi Arabia, 1999</li></ul>

## Professional Experience

<ul style="list-style-type: none"><li>• Member of the Permanent Committee to Study the Extension and Benefit from the Services of Saudi Faculty Members and Those in Similar Status Who Have Exceeded the Retirement Age 2025</li></ul>
<ul style="list-style-type: none"><li>• Member of a committee for creating a qualitative bachelor's degree program in one branch of Mathematics, October 2023.</li></ul>
<ul style="list-style-type: none"><li>• Member of the development and modernization committee in the department of mathematics, King Saud University, January 2023.</li></ul>
<ul style="list-style-type: none"><li>• Vice Supervisor of Statistics and Information Department at King Saud University, Riyadh, Saudi Arabia, January 2018-2021</li></ul>
<ul style="list-style-type: none"><li>• Vice Head of Mathematics Department at King Saud University, Riyadh, Saudi Arabia, September 2015-September 2017</li></ul> <p>(The Department got the National Academic Accreditation in 2016 and renewed the International Academic Accreditation from ASIIN in 2017)</p>
<ul style="list-style-type: none"><li>• Assistant Professor of Applied Mathematics at King Saud University, Riyadh, Saudi Arabia, 2011-Now</li></ul>
<ul style="list-style-type: none"><li>• Member of the Board of Directors for the Saudi Society for Mathematical Sciences, May 2017-2020</li></ul>
<ul style="list-style-type: none"><li>• Member of a standing committee in the Scientific Council at KSU concerning retirees' requests to continue working at the university by yearly contracts, King Saud University, 2017-Now</li></ul>
<ul style="list-style-type: none"><li>• Member of the training opportunities committee targeting the labor market in the university city for female students, 2018-2019</li></ul>
<ul style="list-style-type: none"><li>• Member of the Organizing Committee for the 4th "Teaching and Learning Mathematics in General Education- Distinct research and experiences" Conference, King Saud University, Riyadh 21-23 / 10/2014</li></ul>
<ul style="list-style-type: none"><li>• Assistant trainer at Mawhiba, Summer Camp, Riyadh, Saudi Arabia, 2011</li></ul>
<ul style="list-style-type: none"><li>• Member in the Examinations committee at Mathematics Department in the College of Science, King Saud University, Riyadh Saudi Arabia, 2011</li></ul>
<ul style="list-style-type: none"><li>• Demonstrator at Mathematics Department in The University of Manchester, 2009-2010</li></ul>
<ul style="list-style-type: none"><li>• Demonstrator at Mathematics Department in the College of Science, King Saud University, Riyadh, Saudi Arabia, 2004-2008</li></ul>

## Research

### Published Papers

General isotropic charged fluid spheres within the matter coupling gravity formalism  
M.R. Shahzad, Wajiha Habib, Asifa Ashraf, Faisal Javed, Awatef Abidi, Maha Alammari, Ali M. Mubarak  
<https://doi.org/10.1016/j.dark.2024.101726>, Feb 2025.

<p>The impact of alternant codes over Eisenstein integers on modern technology. <i>Comp. Appl. Math.</i> 44, Sajjad, M., Shah, T., Abbas, M., Maha Alammari.  <a href="https://doi.org/10.1007/s40314-024-03057-y">https://doi.org/10.1007/s40314-024-03057-y</a>, 2025</p>
<p>Exploration of solitary waves and periodic optical soliton solutions to the nonlinear two-dimensional Zakharov-Kuzetsov equation, Maha Alammari, Mujahid Iqbal, Salisu Ibrahim, Nahaa Alsubaie and Aly Seadawy, <i>Optical and Quantum Electronics</i>, 56:7.  <a href="https://DOI10.1007/s11082-024-06517-1">https://DOI10.1007/s11082-024-06517-1</a>, June 2024.</p>
<p>A construction of novel soliton solutions to the nonlinear fractional Kairat-II equation through computational simulation. Mujahid Iqbal, Dianchen Lu, Maha Alammari, Aly R. Seadawy, Nahaa E. Alsubaie, Zhanar Umurzakhova, Ratbay Myrzakulov. <i>Optical and Quantum Electronics</i>, 56:845. <a href="https://doi.org/10.1007/s11082-024-06467-8">https://doi.org/10.1007/s11082-024-06467-8</a>, April 2024.</p>
<p>Non-uniform heat source or sink on the radiated and thermophoretic flow of slender body of paraboloid and cone revolutions in a saturated medium with Brownian motion. Huda Alsaud and Maha Alammari. <i>Modern Physics Letters B</i>.  <a href="https://doi.org/10.1142/S0217984924501811">https://doi.org/10.1142/S0217984924501811</a>, January 2024.</p>
<p>Exploring optical soliton solutions of a self-focusing nonlinear Schrödinger equation by two effective techniques. Shafiq Ahmad, Maha Alammari, Aman Ullah, Shabir Ahmad, Sayed Saifullah and Naila Nasreen. <i>Optical and Quantum Electronics</i>, 56: 339 (2024).  <a href="https://doi.org/10.1007/s11082-023-05936-w">https://doi.org/10.1007/s11082-023-05936-w</a>, December 2023.</p>
<p>Numerical framework of magnetized thermal Casson nanoliquid flow with time-dependent stretching channel enclosing chemical reaction effect and variable fluid properties: A Particle Swarm Optimization with stability. Maha Alammari. <i>Modern Physics Letters B</i>.  <a href="https://doi.org/10.1142/S0217984924501094">https://doi.org/10.1142/S0217984924501094</a>, December 2023.</p>
<p>Designing pair of nonlinear components of a block cipher over quaternion integers. Muhammad Sajjad, Tariq Shah, Huda Alsaud and Maha Alammari. <i>AIMS Mathematics</i>, 8(9): 21089–21105.  <a href="https://DOI: 10.3934/math.20231074">https://DOI: 10.3934/math.20231074</a>, July 2023.</p>
<p>Construction and Decoding of BCH-Codes Over the Gaussian Field. Muhammad Sajjad, Tariq Shah, Maha Alammari, and Huda Alsaud. <i>IEEE Access</i>.  <a href="https://DOI: 10.1109/ACCESS.2023.3293007">https://DOI: 10.1109/ACCESS.2023.3293007</a>, July 2023.</p>
<p>A novel mathematical model for the effects of wall properties on pumping flow of a biofluid in a symmetrical three-dimensional curved duct, <i>Frontiers, Frontiers in Physics</i>, (2023).</p>
<p>Natural Bio-Convective Flow of Maxwell Nanofluid over an Exponentially Stretching Surface with Slip Effect and Convective Boundary Condition, <i>Scientific Reports</i>, (2022)12:2220.</p>
<p>Hermitian matrix polynomials with real eigenvalues of definite type-part I: Classification. <i>Linear Algebra Appl.</i>, 436 (2012), 3954-3973.</p>
<p>Standard Triples of Structured Matrix Polynomials. <i>Linear Algebra Appl.</i>, 437 (2012), 817-834.</p>

## Theses

<p>Analysis of Structured Polynomial Eigenvalue Problems, Ph.D. Thesis, The University of Manchester, August 2011.</p>
<p>Products of Bergman Space Toeplitz Operators and Brown-Halmos Type Theorems, M.Sc. Thesis, King Saud University, June 2006.</p>

### Scientific Refereeing

Participating as a referee for Engineering Applications of Artificial Intelligence Journal, July 2024
Participating as a referee at The First Cultural Scientific Concourse for the Girl Students from Universities and Institutes of Higher Education in the GCC, 20 January 2015, Riyadh, Saudi Arabia.
Refereed for Arab Journal of Mathematical Sciences (AJMS), 2014.
Refereed for Linear Algebra and its Applications Journal (LAA), 2013.
Participating as a referee at National Olympiad for Scientific Creativity on 19/3/2012, Riyadh, Saudi Arabia.
Refereed for IMA Journal of Numerical Analysis and SIAM Journal on Matrix Analysis and applications, 2011.

### Talks at Conferences

Scientific Forum Week, 17 April 2018, King Saud University, Saudi Arabia. "Saudi Association of Mathematical Sciences"
SIAM Conference on Applied Linear Algebra, 18-22 June 2012, Universitat Politècnica De Valencia, Spain. "Standard Triples of Structured Matrix Polynomials"
ILAS conference, 21-25 June 2010, Pisa Italy. "Classification of Hermitian Matrix Polynomials with Real Eigenvalues"
23rd Biennial Conference on Numerical Analysis 23-26 June 2009, Strathclyde University, Glasgow, Scotland "Quasidefinite Matrix Polynomials"
Young Researchers Workshop on Spectral Theory, Quantum Chaos and Random Matrices, June 29th-July 1st, 2009, Cardiff University, UK. "Hyperbolic Matrix Polynomials"

Human Capability Initiative, 28-29 February 2024, Riyadh, Saudi Arabia.
Emotional Intelligence Program, 12-13 February 2024, The Institute of Leadership & Management, UK.
The 4 <sup>th</sup> Conference on Mathematical Sciences and Applications, 11-12 April 2018, Riyadh, Saudi Arabia.
SIAM Conference on Applied Linear Algebra, 26-30 October 2015, Hayatt Regency Atlanta, Atlanta, Georgia, USA.
The First Cultural Scientific Concourse for the Girl Students from Universities and Institutes of Higher Education in the GCC, 20 January 2015, Riyadh, Saudi Arabia.
2012 SIAM Conference on Applied Linear Algebra, 18-22 June 2012, Universitat Politècnica De Valencia, Spain.
GCF, January 21st-24th 2012, Riyadh, Saudi Arabia.
MOPNET4, 2011, The University of Manchester, UK.
The 2nd Manchester SIAM Student Chapter Conference, May 20th, 2011, The University of Manchester, UK (presented poster: Numerical Linear Algebra Group in Manchester).
The 1st Manchester SIAM Student Chapter Conference, April 6th, 2010, The University of Manchester, UK.

MOPNET2, March 29th-March 30th 2010, University of Nottingham, UK.
The 3rd Annual Oxford University SIAM Student Chapter, February 9th, 2010, University of Oxford, UK.
Mathematics Research Students Conference (MRSC), May 2009, The University of Manchester, UK.
The 50th British Applied Mathematics Colloquium (BAMC), 31 Mar-3 April 2008, The University of Manchester, UK.
Workshop on New Directions in Functions of Matrices, May 2008, The University of Manchester, UK.
Workshop on Structured Matrix Polynomials, 13th November 2007, University of Nottingham, UK.

## **Professional Development**

### **Courses and Training Programs**

<ul style="list-style-type: none"> <li>• Different Personality Types of Students, Feb 2024, King Saud University</li> </ul>
<ul style="list-style-type: none"> <li>• Question writing techniques for Administrative and Actuarial Science, Education and Training Evaluation Commission, September 2023, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Building standards for designing training briefcases, March 1, 2023, King Saud University, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Train of the trainers (TOT) course, February 7-11, 2022, Technical and Vocational Training Corporation, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Coaching: Exam Preparation Course (for students), Deanship of Skills Development, March 30, 2022, King Saud University</li> </ul>
<ul style="list-style-type: none"> <li>• Statistical analysis using SPSS, February 4-6, 2020, King Saud University, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Statistical skills in preparing administrative reports, January 26-28, 2020, King Saud University, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Scientific Research in Machine Learning, 9 December 2019, King Saud University, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Scientific Supervision of Postgraduate Students, 12 September 2019, King Saud University, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Performance-based Assessment program, 26 August, 2019, King Saud University, Saudi Arabia</li> </ul>

<ul style="list-style-type: none"> <li>• The first panel discussion on future jobs in Saudi Arabia, 15 January, 2019, Riyadh Chamber, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Developing Standards of Educational Curricula from the Point of View of the Relevant Authorities Workshop, Education Evaluation Commission, , 26 Nov. 2018, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• A day for exploring Math (MATH IN PRACTICE+) Workshop, 20 November 2018, Pearson, Double Tree by Hilton, Riyadh, Saudi Arabia.</li> </ul>
<ul style="list-style-type: none"> <li>• The 2nd Annual Meeting of the University's Vice Rectorate for Planning and Development entitled (Continuous Improvement), 1 October 2018, King Saud University</li> </ul>
<ul style="list-style-type: none"> <li>• Authentic Academic Leadership, ACL, 7-8 March, 2018, Princess Nora Bint Abdulrahman University</li> </ul>
<ul style="list-style-type: none"> <li>• Documentary Awareness: Practical application of confidential documents and specialized documents, 12 March 2018, King Saud University</li> </ul>
<ul style="list-style-type: none"> <li>• Qualifying Administrative Leaders, 8—10 January 2017, King Saud University, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Student-Centered Learning, 08 December 2016, King Saud University, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Intellectual Property Right, 11—12 April 2016, King Saud University</li> </ul>
<ul style="list-style-type: none"> <li>• Submission of Research Projects, 20 April 2015, General Administration for Research Grants at King Abdulaziz City for Science and Technology</li> </ul>
<ul style="list-style-type: none"> <li>• Teaching and Learning, 27-31 July 2015, University of South Florida, Tampa, United States of America</li> </ul>
<ul style="list-style-type: none"> <li>• The Basics of Career Assessment, 17-18 May 2015, King Saud University, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Effective teaching workshop, December 2012, King Saud University, Riyadh, Saudi Arabia.</li> </ul>
<ul style="list-style-type: none"> <li>• Safe and Comfortable Learning Context Workshop, November 2012, King Saud University, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Professional teaching competencies in HE, November 2012, King Saud University, Riyadh, Saudi Arabia.</li> </ul>

<ul style="list-style-type: none"> <li>• Learning Based Brainstorming, 16-17 September 2012, King Saud University, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Training Young Students for the Mathematics Olympics, 25-30 August 2012, Mawhiba, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Viva Survivor Workshop, Faculty of Engineering and Physical Sciences, 21st July 2010, the University of Manchester, UK.</li> </ul>
<ul style="list-style-type: none"> <li>• Graduate Teaching Assistance (GTA) Workshop, Faculty of Engineering and Physical Sciences, 20th February 2009, The University of Manchester, UK</li> </ul>
<ul style="list-style-type: none"> <li>• Supporting Postgraduate Students who teach Mathematics and Statistics Workshop. 6th November 2008, The University of Manchester, UK</li> </ul>
<ul style="list-style-type: none"> <li>• Academic Writing Workshop, Faculty of Engineering and Physical Sciences, 11th February 2008, The University of Manchester, UK</li> </ul>

## Memberships

<ul style="list-style-type: none"> <li>• SIAM-Society of Industrial and Applied Mathematics</li> </ul>
<ul style="list-style-type: none"> <li>• ILAS-International Society of Linear Algebra</li> </ul>
<ul style="list-style-type: none"> <li>• Saudi Association for Mathematical Sciences</li> </ul>

## Activities

<ul style="list-style-type: none"> <li>• Talking about the Bachelor of Mathematics program in the Path to a Better Future (Masari) program, April 2024, King Saud University.</li> </ul>
<ul style="list-style-type: none"> <li>• Attending "The Higher Education of Girls in The Kingdom" Symposium, 14/1/2013, Riyadh, Saudi Arabia</li> </ul>
<ul style="list-style-type: none"> <li>• Organizing the 1st Manchester SIAM Student Chapter Conference, April 26th, 2010, Manchester, UK</li> </ul>
<ul style="list-style-type: none"> <li>• Participating in Saudis around the world radio program, England, 2010</li> </ul>
<ul style="list-style-type: none"> <li>• Participating in "A returning scholarship student" event at King Saud University, Riyadh, Saudi Arabia, 2011</li> </ul>
<ul style="list-style-type: none"> <li>• Participating in organizing the open day at King Saud University, Riyadh, Saudi Arabia, 2005</li> </ul>

## More on General Education

<ul style="list-style-type: none"><li>• Attending Foundation and Introductory Piano Courses 2022-2023, Institute of the Ministry of Culture and Arts, Riyadh, Saudi Arabia</li></ul>
<ul style="list-style-type: none"><li>• Attending selected sessions of WEP 2013, KAUST, Thuwal, Saudi Arabia, January 2013</li></ul>
<ul style="list-style-type: none"><li>• Interested in self- development</li></ul>
<ul style="list-style-type: none"><li>• A workshop on virtual classrooms, October 2012, King Saud University</li></ul>
<ul style="list-style-type: none"><li>• A course on French Language for beginners, The International Society, The University of Manchester, Manchester, United Kingdom, 2010</li></ul>
<ul style="list-style-type: none"><li>• A course on using smart board and display stand (E-podium) effectively, 18 September 2012, King Saud University</li></ul>
<ul style="list-style-type: none"><li>• Computer courses on Microsoft front page, Adobe Photoshop and Macromedia flash, New Horizon, Riyadh, Saudi Arabia, 2004</li></ul>
<ul style="list-style-type: none"><li>• English Language Courses, Direct English, Riyadh, Saudi Arabia, 2005</li></ul>
<ul style="list-style-type: none"><li>• A course on Scientific Research, Research Center, King Saud University, Riyadh, Saudi Arabia, 2005</li></ul>