

Dr. Ammar Ali Masad Alsinai

Assistant Professor of Mathematics and Applied Mathematics

College of Engineering & IT, Onaizah Colleges, Unaizah, Al-Qassim, Saudi Arabia

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Scopus Author ID: 57222957516

ResearchGate: researchgate.net/profile/Ammar-Alsinai

ORCID: 0000-0002-5221-0574

Professional Profile

I hold a Ph.D. in Mathematics from the University of Mysore, India, and a Ph.D. in Applied Mathematics from C. V. Raman Global University, India, in addition to an M.Sc. in Mathematics from Savitribai Phule Pune University, and two Bachelor's degrees in Mathematics and Computer Science from Ibb University, Yemen.

Throughout my career, I have published more than 60 research articles indexed in Scopus and SCIE journals. I have actively contributed to the academic community as a volunteer peer reviewer for over 40 international journals, reviewing more than 150 research articles, and I serve as Academic Editor for several journals, including the *Journal of Mathematics* (Wiley) and *PLOS ONE*, where I have handled more than 40 manuscripts.

As an Assistant Professor, I am committed to high-quality teaching and research, supervising students at different levels and collaborating with international teams in graph theory, fractional calculus, multi-agent systems, nanofluids, and mathematical modelling in engineering and epidemiology.

Research Metrics

Index	# Papers	H-index	Citations
Scopus	60	13	414
ISI Web of Science	48	10	628
Google Scholar	70	17	616

Editorial & Reviewing Activity (summary):

- More than 60 research articles published in Scopus / SCIE indexed journals.
- Academic Editor for *Journal of Mathematics* (Wiley) and *PLOS ONE*.
- Volunteer peer reviewer for over 40 international journals (Scopus / SCIE).
- Reviewed more than 150 research articles.

Research Interests

- Applied and discrete mathematics, graph theory (domination, topological indices, energy).
- Ordinary, partial and fractional differential equations; stability and controllability.
- Fractional dynamical systems and evolution equations; control theory.
- Containment, consensus, and resilient control of fractional-order multi-agent systems.
- Nanofluids, thin-film flows, entropy generation, and heat and mass transfer.
- Mathematical modelling of epidemics (COVID-19, dengue, etc.).
- Applications of graph theory to chemical and nano-structures.

Education

Ph.D. in Mathematics

University of Mysore, Mysuru, India

Thesis: *Study on Some Recent Topic in Graph Theory and Its Application*

Ph.D. in Applied Mathematics

C. V. Raman Global University, Odisha, India

Thesis: *Advancing Multi-Agent System through Artificial Integration*

M.Sc. in Mathematics

Savitribai Phule Pune University, Pune, India

B.Sc. in Mathematics and Computer Science

Ibb University, Ibb, Yemen

2010

B.Sc. in Mathematics (Education College)

Ibb University, Ibb, Yemen

2008

IELTS Preparation Diploma (English)

English Castle Institute, Saudi Arabia

October 2020 – January 2022

Academic and Professional Positions

Assistant Professor of Mathematics and Computer Science

College of Engineering & IT, Onaizah Colleges, Unaizah, Al-Qassim, Saudi Arabia

Teaching undergraduate and master-level courses in calculus, statistics, DOE, reliability, and decision analysis; supervising student projects; contributing to curriculum development and research activities.

Lecturer / Assistant Professor (Part-time / Visiting)

University of Lahore, Sargodha Campus, Pakistan

Teaching mathematics and co-supervising more than eight Master's theses in applied mathematics and mathematical modelling.

Teaching and Research (Post-Ph.D.)

Kuvempu University, India

Lecturing in mathematics during and after Ph.D. studies; tuition at undergraduate and postgraduate levels.

Lecturer in Mathematics

National University, Yemen

2012–2016

Teacher of Mathematics and Physics

Al-Maqdad Secondary School, Ibb, Yemen

2009–2019

Scholarships and Awards

- Yemeni Government Scholarship for M.Sc. studies in India (ICCR India scholarship).
- Yemeni Government Scholarship for Ph.D. studies in India.
- Best Mathematics Teacher Award, 2022.

Editorial Roles

Academic Editor

- *Journal of Mathematics* (Wiley).
- *PLOS ONE*.
- *Journal of Mathematical Analysis and Modelling*.
- *International Journal of Advancements in Mathematics*.
- Academic activities with the American Mathematical Society.

Verified Peer Reviewer (Selected Journals)

- Combinatorial Chemistry and High Throughput Screening
- Eurasian Chemical Communications
- Discrete Mathematics, Algorithms and Ap-
- Partial Differential Equations in Applied

Mathematics

- The European Physical Journal Plus
- Current Organic Chemistry
- Scientific Reports
- Applied Artificial Intelligence
- International Journal of Fuzzy Systems
- Annals of Mathematics and Physics
- Dynamics of Continuous, Discrete and Impulsive Systems (Series B)
- Engineering and Technology Journal
- International Journal of Dynamics and Control
- Journal of Function Spaces
- Biointerface Research in Applied Chemistry
- Electronic Journal of Graph Theory and Applications
- Gastroenterology Research and Practice
- Journal of Inequalities and Applications
- Journal of Intelligent & Fuzzy Systems
- American Journal of Computational Mathematics
- Applied Mathematics and Information Sciences
- Asian Journal of Mathematics and Computer Research

Teaching Experience (Selected)

Undergraduate Courses

- Calculus I & II (limits, derivatives, applications, techniques of integration, series).
- Descriptive Statistics: measures of central tendency and dispersion; Pearson & Spearman correlation; probability.
- Planning and Statistical Analysis for Engineers.
- Reliability Analysis and Maintenance Planning.
- Decision Analysis and Optimization Techniques.
- Engineering Mathematics for Civil, Electrical, AI, Cybersecurity and Clean Energy majors.

Postgraduate Courses

- Planning and Statistical Analysis (Master level).
- Design of Experiments (DOE) in Engineering.
- Advanced topics in fractional calculus and control of multi-agent systems.

Selected Peer-Reviewed Journal Articles (First Author)

1. Alsinai, A., Zaman, A., & Niazi, A. U. K. (2025). Higher-order sliding mode observer and fractional-order sliding mode control for precise wildfire tracking in heterogeneous multi-agent systems. *Systems Science & Control Engineering*, 13(1), 2460440.

2. Alsinai, A., Niazi, A. U. K., Babar, M. Z., Jamil, A., & Faisal, N. (2025). Robust resilient base containment control of fractional order multiagent systems with disturbance and time delays. *Mathematical Methods in the Applied Sciences*.
3. Alsinai, A., Piqueira, J. R. C., Hassan, W. U., Niazi, A. U. K., & Safder, F. (2025). Dynamic nonlinear control strategies for resilient heterogeneous vehicle platooning and handling Byzantine attacks in communication networks. *Heliyon*.
4. Alsinai, A., Al-shamiri, M., Hassan, W. U., & Niazi, A. U. K. (2024). Fuzzy adaptive approaches for robust containment control in nonlinear multi-agent systems under false data injection attacks. *Fractal and Fractional*.
5. Alsinai, A., Xavier, A., Baby, A., & Ahmed, H. (2024). Graph entropy for adjacently and non-adjacently configured pentagonal structure of carbon nanocones. *Current Nanomaterials*.
6. Alsinai, A., Xavier, A., & Suresh, A. (2024). Prediction of properties of boron α -icosahedral nanosheet by bond-addictive M-polynomial. *Scientific Reports*.
7. Albasheir, N. A., Alsinai, A., Niazi, A. U. K., & Gargouri, A. (2023). A theoretical investigation of Caputo variable order fractional differential equations: existence, uniqueness, and stability analysis. *Computational and Applied Mathematics*.
8. Mehmood, Y., Alsinai, A., Shafqat, R., & Qahtan, R. S. (2023). Numerical investigation of the finite thin film flow for hybrid nanofluid with kerosene oil as base fluid over a stretching surface along with the viscous dissipation and variable thermal conductivity effects. *Journal of Mathematics*.
9. Abdelkader, M., Alsinai, A., Shafqat, R., & Almazah, M. (2023). Controllability of fractional stochastic evolution inclusion via Hilfer derivative of fixed point theory. *AIMS Mathematics*.
10. Singaraj, R. M., Alsinai, A., Siddiqui, M. K., & Ahmed, H. (2023). A perspective approach to study the valency-based irregular indices for benzenoid planar octahedron structures. *Journal of Chemistry*.
11. Alsinai, A., Omran, A. A., Aljanaby, H. H., & Nandappa, P. (2022). The Hn-edge domination in graphs. *Information Sciences Letters*, 11(5).
12. Alsinai, A., Omran, A. A., Ibrahim, T. A. A., & Othman, H. A. (2022). Some properties of whole edge domination in graphs. *Applied Mathematics & Information Sciences*, 16(3).
13. Alsinai, A., Saleh, A., Ahmed, H., & Nandappa, S. N. (2022). On fourth leap Zagreb index of graphs. *Discrete Mathematics, Algorithms and Applications*.
14. Alsinai, A., Ahmed, H., Alwardi, A., & Nandappa, S. N. (2021). HDR degree based indices and MHR-polynomial for the treatment of COVID-19. *Biointerface Research in Applied Chemistry*.
15. Alsinai, A., Afzal, F., Hussain, S., & Chaudhry, F. (2021). On topological aspects of silicate network using M-polynomial. *Journal of Discrete Mathematical Sciences and Cryptography*.

A complete list of more than 60 journal articles (Scopus/SCIE) is available upon request or through my ResearchGate and Google Scholar profiles.

Full List of Journal Articles

1. **Formation Tracking of Nonlinear Multi-Agent Systems via Laplacian-Free Adaptive Edge-Based Control.**
International Journal of Networked and Distributed Computing, Article, Nov 2025.
Authors: Ammar Alsinai, N. Shehla, Azmat Ullah Khan Niazi.
2. **Optimal strategies for managing Hepatitis B Virus (HBV) infection: a comprehensive approach through education, vaccination, and therapy.**
Scientific Reports, Article, Oct 2025.
Authors: Ammar Alsinai, Azmat Ullah Khan Niazi, Sana Uroej, Bilal Ahmed.
3. **Advancements in analyzing Ulam stability for novel implicit functional equations using inverse Z-transform techniques.**
Journal of Mathematical Sciences, Article, Sep 2025.
Authors: Dr P. Agilan, Julietraja K., Ammar Alsinai, Vaddi Seshagiri Rao.
4. **Fuzzy Distributed Observer-Based Containment Control for Nonlinear Fractional-Order Multi-Agent Systems with Mixed Time-Varying Delays and Cyber Attack Resilience.**
Cybernetics and Systems, Article, Aug 2025.
Authors: Ammar Alsinai, Kamal Lochan Mahanta, Hanan Ahmed, [...], Fareeha Sadaf.
5. **Bipartite Containment Control of Nonlinear Fractional-Order Multi-agent Robotic Systems with Mixed Delays Under Hostile Disturbances.**
International Journal of Applied and Computational Mathematics, Article, Aug 2025.
Authors: Ammar Alsinai, J.R.C. Piqueira, Azmat Ullah Khan Niazi, [...], Saba Riaz.
6. **Optimising consensus efficiency in autonomous vehicle platoons through nonlinear distributed control.**
Journal of Control and Decision, Article, Aug 2025.
Authors: Ammar Alsinai, J.R.C. Piqueira, Waqar Ul Hassan, [...], Muhammad Usman Mehmood.
7. **A control theoretical approach to gene regulation raises quantitative constraints for dynamic homeostasis in stochastic gene expression.**
Preprint, Aug 2025.
Authors: Guilherme Giovanini, Cyro von Zuben de Valega Negrão, Ammar Alsinai, Alexandre F. Ramos.
8. **Observer-Based Event-Triggered Control for Quasi-Containment in Fractional-Order Multi-Agent Systems Under DoS Attacks.**
Neural Processing Letters, Article, Jul 2025.
Authors: Ammar Alsinai, Wajiha Abdul Khaliq, Azmat Ullah Khan Niazi, Taoufik Saidani.
9. **Oblique Stagnation Point Flow of Maxwell Trihybrid Nano-Material Over a Stretching Cylinder.**
[Journal: as given] Article, Apr 2025.
Authors: Ayesha Saddiqa, Yasir Mehmood, Ammar Alsinai, Muhammad Bilal.

10. **Modeling oil production management with fractional-order dynamics and complexity analysis.**
Multiscale and Multidisciplinary Modeling, Experiments and Design, Article, Apr 2025.
 Authors: Dr. Gunasekar T., Ammar Alsinai, Periyasamy Udhyasankar, Prabakaran Raghavendran.
11. **Selection of an Optimal Warehouses Using Global Regular Domination in Graphs.**
International Journal of Mathematics and Mathematical Sciences, Article, Mar 2025.
 Authors: R. Sundareswaran, Shanmugapriya M., Ammar Alsinai, [...], Hanan Ahmed.
12. **Higher-order sliding mode observer and fractional-order sliding mode control for precise wildfire tracking in heterogeneous multi-agent systems.**
Systems Science & Control Engineering, Article, Feb 2025.
 Authors: Ammar Alsinai, Aasma Zaman, Azmat Ullah Khan Niazi.
13. **Robust Resilient Base Containment Control of Fractional Order Multiagent Systems With Disturbance and Time Delays.**
Mathematical Methods in the Applied Sciences, Article, Feb 2025.
 Authors: Ammar Alsinai, Azmat Ullah Khan Niazi, Muhammad Zeeshan Babar, [...], Nujood Faisal.
14. **Dynamic Nonlinear Control Strategies For Resilient Heterogeneous Vehicle Platooning and Handling Byzantine Attacks in Communication Networks.**
Heliyon, Article, Jan 2025.
 Authors: Ammar Alsinai, J.R.C. Piqueira, Waqar Ul Hassan, [...], Farida Safder.
15. **Existence and Controllability for Second-Order Functional Differential Equations With Infinite Delay and Random Effects.**
International Journal of Differential Equations, Article, Dec 2024.
 Authors: Srinivasan Madhumitha, Dr. Gunasekar T., Ammar Alsinai, [...], Read Saleh Qahtan.
16. **Numerical study of unsteady thin film flow and heat transfer of power-law tetra hybrid nanofluid with velocity slip over a stretching sheet using engine oil.**
SN Applied Sciences, Article, Dec 2024.
 Authors: Yasir Mehmood, Ammar Alsinai, Muhammad Bilal, Ifrah Summan.
17. **Numerical study of unsteady thin film flow of power-law tetra hybrid nanofluid with velocity slip effect over a stretching sheet using sodium alginate as base fluid.**
SN Applied Sciences, Article, Nov 2024.
 Authors: Yasir Mehmood, Ammar Alsinai, Ifrah Summan, Muhammad Bilal.
18. **Neighbourhood Sum-Based Structural Analysis for Sodalite System.**
Current Organic Synthesis, Article, Nov 2024.
 Authors: Julietraja K., S. Arul Amirtha Raja, Ammar Alsinai.
19. **Exploring the zero-divisor graph over commutative ring: topological examine of algebraic structure.**
Journal of Applied Mathematics and Computing, Article, Oct 2024.
 Authors: Akhila Suresh, Mohammed Al-shamiri, Ammar Alsinai, Antony Xavier.

20. **Numerical study of Maxwell nanofluid flow with MWCNT and SWCNT considering quartic autocatalytic reactions and Thompson-Troian slip mechanism.**
SN Applied Sciences, Article, Oct 2024.
 Authors: Yasir Mehmood, Ammar Alsinai, Azmat Ullah Khan Niazi, [...], Tasneem Akhtar.
21. **The Perfect Score Function and Optimized Weighted Geometric Operator for Ranking Single-Valued Neutrosophic Numbers in the Decision-Making Process.**
Journal of Mathematics, Article, Oct 2024.
 Authors: R.V. Jaikumar, R. Sundareswaran, Ammar Alsinai, Shanmugapriya Marayanagaraj.
22. **Fuzzy Adaptive Approaches for Robust Containment Control in Nonlinear Multi-Agent Systems under False Data Injection Attacks.**
Fractal and Fractional, Article, Aug 2024.
 Authors: Ammar Alsinai, Mohammed Al-shamiri, Waqar Ul Hassan, [...], Azmat Ullah Khan Niazi.
23. **Distributed delay control strategy for leader-following cyber secure consensus in Riemann-Liouville fractional-order delayed multi-agent systems under denial-of-service attacks.**
Partial Differential Equations in Applied Mathematics, Article, Aug 2024.
 Authors: J.R.C. Piqueira, Ammar Alsinai, Azmat Ullah Khan Niazi, Airish Jamil.
24. **Numerical Investigation of Entropy Generation on Micropolar Trihybrid Nanofluid Flow with Blood as Base Fluid in a Channel.**
Journal of Mathematics, Article, Jul 2024.
 Authors: Yasir Mehmood, Ammar Alsinai, Muhammad Bilal, [...], Nujood Faisal.
25. **Curcumin-Conjugated PAMAM Dendrimers of Two Generations: Comparative Analysis of Physiochemical Properties Using Adriatic Topological Indices.**
ACS Omega, Article, Mar 2024.
 Authors: Anuradha D. S., Julietraja K., B. Jaganathan, Ammar Alsinai.
26. **Computation of Structural Descriptors of Pyrene Cored Dendrimers through Quotient Graph Approach and Its Graph Entropy Measures.**
Journal of Nanomaterials, Article, Feb 2024.
 Authors: Antony Xavier, Annmaria Baby, Ammar Alsinai, [...], Hanan Ahmed.
27. **Graph Entropy for Adjacently and Non-Adjacently Configured Pentagonal Structure of Carbon Nanocones.**
Current Nanomaterials, Article, Feb 2024.
 Authors: Ammar Alsinai, Antony Xavier, Annmaria Baby, [...], Hanan Ahmed.
28. **Prediction of properties of boron α -icosahedral nanosheet by bond-addictive M-polynomial.**
Scientific Reports, Article, Jan 2024.
 Authors: Antony Xavier, Julietraja K., Ammar Alsinai, Akhila Suresh.

29. **HYERS STABILITY OF AQC FUNCTIONAL EQUATION.**
Dynamics of Continuous, Discrete and Impulsive Systems Series B, Article, Jan 2024.
 Authors: Dr P. Agilan, Julietraja K., B. Kanimozhi, Ammar Alsinai.
30. **On Certain Degree Based and Bond-Additive Topological Indices of Dodeca-Benzo-Circumcorenene.**
Combinatorial Chemistry & High Throughput Screening, Article, Dec 2023.
 Authors: Dr. Gunasekar T., Kathavarayan Ponnusamy, Ammar Alsinai, Dr. Govindhan Murugan.
31. **Dynamics and Analysis of Dengue Epidemics: A Fractional Order SIR Model with Next-Generation Matrix Methodology.**
 Preprint, Dec 2023.
 Authors: Ammar Alsinai, Azmat Ullah Khan Niazi, Easha Ramay, B. Ahmed.
32. **Computation of Neighborhood M-Polynomial of Cycloparaphenylene and Its Variants.**
ACS Omega, Article, Dec 2023.
 Authors: Dr. Govindhan Murugan, Julietraja K., Ammar Alsinai.
33. **A theoretical investigation of Caputo variable order fractional differential equations: existence, uniqueness, and stability analysis.**
Computational and Applied Mathematics, Article, Nov 2023.
 Authors: Nafisa A. Albasheir, Ammar Alsinai, Azmat Ullah Khan Niazi, [...], Ameni Gargouri.
34. **Numerical Investigation of the Finite Thin Film Flow for Hybrid Nanofluid with Kerosene Oil as Base Fluid over a Stretching Surface along with the Viscous Dissipation and Variable Thermal Conductivity Effects.**
Journal of Mathematics, Article, Nov 2023.
 Authors: Yasir Mehmood, Ammar Alsinai, Ramsha Shafqat, [...], Read Saleh Qahtan.
35. **Graph Entropy for Adjacently and Non-Adjacently Configured Pentagonal Structure of Carbon Nanocones.**
 Preprint, Jul 2023.
 Authors: Antony Xavier, Annmaria Baby, Eddith Sarah Varghese, [...], Hanan Ahmed.
36. **Degree-Based Topological Descriptors of Some Derived Graphs By Using a Novel Polynomial.**
European Chemical Bulletin, Article, Jun 2023.
 Authors: Nanjundaswamy M., Puttaswamy Puttaswamy, Ammar Alsinai, Murat Cancan.
37. **Certain Topological Indices of Chemical Interconnection Networks.**
European Chemical Bulletin, Article, Jun 2023.
 Authors: Ramesha M. S., Puttaswamy Puttaswamy, Ammar Alsinai, Murat Cancan.
38. **Topological Space Generated By Edges Neighborhoods of Discrete Topological Graphs.**
European Chemical Bulletin, Article, Jun 2023.

Authors: Ammar Alsinai, Dhananjayamurthy B.V., Mohammed Abdali Abdlhusein, [...], Murat Cancan.

39. **Controllability of fractional stochastic evolution inclusion via Hilfer derivative of fixed point theory.**
AIMS Mathematics, Article, Jun 2023.
Authors: Moumen Abdelkader, Ammar Alsinai, Ramsha Shafqat, [...], Mohammed Almazah.
40. **Different Types of Domination Topological Indices of Some Chemical Drugs.**
European Chemical Bulletin, Article, May 2023.
Authors: Raju Siddaraju, Puttaswamy Puttaswamy, Ammar Alsinai.
41. **Analysis of fractional stochastic evolution equations by using Hilfer derivative of finite approximate controllability.**
AIMS Mathematics, Article, May 2023.
Authors: Moumen Abdelkader, Ramsha Shafqat, Ammar Alsinai, [...], Mohammadi Begum Jeelani Shaikh.
42. **A Perspective Approach to Study the Valency-Based Irregular Indices for Benzenoid Planar Octahedron Structures.**
Journal of Chemistry, Article, Apr 2023.
Authors: Rosary Maria Singaraj, Ammar Alsinai, Muhammad Kamran Siddiqui, Hanan Ahmed.
43. **Stability Analysis of a New Class of Series Type Additive Functional Equation in Banach Spaces: Direct and Fixed Point Techniques.**
Mathematics, Article, Feb 2023.
Authors: Dr P. Agilan, Julietraja K., Mohammed Almazah, Ammar Alsinai.
44. **Classical and Fixed Point Approach to the Stability Analysis of a Bilateral Symmetric Additive Functional Equation in Fuzzy and Random Normed Spaces.**
Mathematics, Article, Jan 2023.
Authors: Dr P. Agilan, Mohammed Almazah, Julietraja K., Ammar Alsinai.
45. **Analysis of Controllability of Fractional Functional Random Integroeolution Equations with Delay.**
Symmetry, Article, Jan 2023.
Authors: Kinda Abuasbeh, Ramsha Shafqat, Ammar Alsinai, Muath Awadalla.
46. **Analysis of the Mathematical Modelling of COVID-19 by Using Mild Solution with Delay Caputo Operator.**
Symmetry, Article, Jan 2023.
Authors: Kinda Abuasbeh, Ramsha Shafqat, Ammar Alsinai, Muath Awadalla.
47. **Distance-Based Structure Characterization of PAMAM-Related Dendrimers Nanoparticle.**
Journal of Nanomaterials, Article, Dec 2022.
Authors: Antony Xavier, Akhila Suresh, Ammar Alsinai, [...], Eddith Sarah Varghese.

48. **A Fuzzy Fractional Order Approach to SIDARTHE Epidemic Model for COVID-19.**
Complexity, Article, Dec 2022.
 Authors: P. Chellamani, Julietraja K., Ammar Alsinai, Hanan Ahmed.
49. **Special Intersection Graph in The Topological Graphs.**
 Preprint, Nov 2022.
 Authors: Ahmed A. Omran, Veena Mathad, Ammar Alsinai, Mohammed Abdali Abdhusein.
50. **Theoretical Analysis of Superphenalene Using Different Kinds of VDB Indices.**
Journal of Chemistry, Article, Sep 2022.
 Authors: Julietraja K., Ammar Alsinai, Abdu Alameri.
51. **Dynamics of COVID-19 Using SEIQR Epidemic Model.**
Journal of Mathematics, Article, Sep 2022.
 Authors: Avinash N.G., Britto Antony Xavier, Ammar Alsinai, [...], P. Chellamani.
52. **Prediction of thermal and energy transport of MHD Sutterby hybrid nanofluid flow with activation energy using Group Method of Data Handling (GMDH).**
Computational and Applied Mathematics, Article, Sep 2022.
 Authors: S. Gopi Krishna, Shanmugapriya M., Ammar Alsinai, Abdu Alameri.
53. **Strong Total Monophonic Problems in Product Graphs, Networks, and Its Computational Complexity.**
Journal of Mathematics, Article, Sep 2022.
 Authors: Eddith Sarah Varghese, Antony Xavier, Ammar Alsinai, [...], Hanan Ahmed.
54. **The H_n -Edge Domination in Graphs.**
Information Sciences Letters, Article, 2022.
 Authors: Ammar Alsinai, Ahmed A. Omran, Haneen Hamed Aljanaby, Prashanth Nandappa.
55. **The Stability or Instability of Co-Even Domination in Graphs.**
Applied Mathematics & Information Sciences, Article, May 2022.
 Authors: Shurooq Abd Ali Imran, Ammar Alsinai, Ahmed A. Omran, [...], Hakeem A. Othman.
56. **The Eccentric Zagreb Indices for the Subdivision of Some Graphs and Their Applications.**
Applied Mathematics & Information Sciences, Article, May 2022.
 Authors: Hanan Ahmed, Ammar Alsinai, Aysha Khan, Hakeem A. Othman.
57. **Some Properties of Whole Edge Domination in Graphs.**
Applied Mathematics & Information Sciences, Article, May 2022.
 Authors: Ammar Alsinai, Ahmed A. Omran, Thaer Abdul Ameer Ibrahim, Hakeem A. Othman.
58. **On fourth leap Zagreb index of graphs.**
Discrete Mathematics, Algorithms and Applications, Article, Apr 2022.
 Authors: Ammar Alsinai, Anwar Saleh, Hanan Ahmed, [...], Soner Nandappa D.
59. **Sharp upper bounds on forgotten and SK indices of cactus graph.**
Journal of Discrete Mathematical Sciences and Cryptography, Article, Feb 2022.

Authors: Ammar Alsinai, Hafiz Mutee ur Rehman, Yasir Manzoor, [...], Mohammad Reza Farahani.

60. **HDR Degree Based Indices and MHR -Polynomial for the Treatment of COVID-19.**

Biointerface Research in Applied Chemistry, Article, Nov 2021.

Authors: Ammar Alsinai, Hanan Ahmed, Anwar Alwardi, Soner Nandappa D.

61. **An improved fast error convergence topology for PD α -type fractional-order ILC.**

Journal of Interdisciplinary Mathematics, Article, Nov 2021.

Authors: Saleem Riaz, Hui Lin, Minhas Mahsud, [...], Murat Cancan.

62. **On topological aspects of silicate network using M- polynomial.**

Journal of Discrete Mathematical Sciences and Cryptography, Article, Nov 2021.

Authors: Farkhanda Afzal, Ammar Alsinai, Sabir Hussain, [...], Faryal Chaudhry.

63. **Sombor index of some nanostructures.**

Journal of Prime Research in Mathematics, Article, Oct 2021.

Authors: Ammar Alsinai, B. Basavangoud, Mahammadsadiq Sayyed, Mohammad Reza Farahani.

64. **Chemical Methodologies Closed Formulas of Topological Properties for Remdesivir ($C_{27}H_{35}N_6O_8P$) Molecular.**

Chemical Methodologies, Article, Oct 2021.

Authors: Sabir Hussain Butt, Ammar Alsinai, Deeba Afzal, [...], Murat Cancan.

65. **Some new degree based topological indices of h-naphtalenic graph via M-polynomial approach.**

Chemical Communications / related journal, Article, Oct 2021.

Authors: Farkhanda Afzal, Ammar Alsinai, Mohammad Zeeshan, [...], Murat Cancan.

66. **Reciprocal leap indices of some wheel related graphs.**

Journal of Prime Research in Mathematics, Article, Aug 2021.

Authors: Swamy Javaraju, Ammar Alsinai, Anwar Alwardi, [...], Soner Nandappa D.

67. **Leap Zagreb Indices For The Central Graph Of Graph.**

Journal of Prime Research in Mathematics, Article, Aug 2021.

Authors: Ammar Alsinai, Anwar Alwardi, Hanan Ahmed, Soner Nandappa D.

68. **Domination topological properties of carbidopa-levodopa used for treatment Parkinson's disease by using φ_p -polynomial.**

Eurasian Chemical Communications, Article, Aug 2021.

Authors: Swamy Javaraju, Hanan Ahmed, Ammar Alsinai, Soner Nandappa D.

69. **Distance and Degree Based Topological Polynomial and Indices of X-Level Wheel Graph.**

Journal of Prime Research in Mathematics, Article, Aug 2021.

Authors: Ali Hasan, Muhammad Hakim Ali Qasmi, Ammar Alsinai, [...], Murat Cancan.

70. **Topological Properties of Graphene Using ψ_k -Polynomial.**

Proceedings of the Jangjeon Mathematical Society, Article, Jul 2021.

Authors: Ammar Alsinai, Anwar Alwardi, Soner Nandappa D.

71. **On Reciprocal leap function of graph.**

Journal of Discrete Mathematical Sciences and Cryptography, Article, Apr 2021.

Authors: Ammar Alsinai, Anwar Alwardi, Soner Nandappa D.

72. **ON THE ψ_k -POLYNOMIAL OF GRAPH.**

Eurasian Chemical Communications, Article, Apr 2021.

Authors: Ammar Alsinai, Anwar Alwardi, Mohammad Reza Farahani, Soner Nandappa D.

73. **On Reciprocals Leap Indices of Graphs.**

International Journal of Analysis and Applications, Article, Jan 2021.

Authors: Ammar Alsinai, Anwar Alwardi, Soner Nandappa D.

Conferences and Workshops (Selected)

- International Conference on Number Theory and Graph Theory, Department of Studies in Mathematics, University of Mysore, India.
- International Conference on Mathematics and its Applications (ICMA-2020), Jnanabharathi Campus, Bengaluru, India.
- International Conference on Graph Labeling and Applications (ICGLA-2020), Goa University, India.
- International Conference on Discrete Mathematics (VICDM-2020), Mangalore University and ADMA, India.

Technical and Professional Skills

Mathematical: Fractional calculus; stochastic processes; control theory; graph theory; PDEs; functional equations; dynamical systems.

Software and Tools: MATLAB; Maple; Python; LaTeX/Overleaf; SPSS; OriginPro; Scilab; ChemDraw; Microsoft Office.

Academic: Research design; scientific writing; peer review; editing; supervision of student projects; curriculum development; conference participation.

Languages

Arabic (Native), English (Proficient), Hindi (Conversational)

References

Available upon request.