د. شاهد زمان

أستاذ مساعد

العلوم الرياضية والفيزيائية ــ شعبة الرياضيات

كلية العلوم والآداب

جامعة نزوى، سلطنة عمان

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موقع المكتب: 11G-15

يعمل في الجامعة: منذ 2024

الحالة الاجتماعية: ....

حصل على درجة الدكتوراه في الرياضيات في عام 2020 م ، من جامعة .وسط الصين ، وعلى درجة الماجستير في الرياضيات في عام2015 م، من كلية الحكومة الجامعية ، كما حصل على درجة بكالوريوس علوم في الرياضيات في عام 2012من جامعة كلية الحكومة الجامعية. أما اهتماماته البحثية فتقع في تشمل اهتماماته البحثية التحليل الطيفي للرسوم البيانية، وتحليل المصفوفات للرسوم البيانية، والمشكلات المتطرفة للرسوم البيانية، والرياضيات المنفصلة، والتركيبات، والكيمياء الرياضية، ونظرية الرسوم البيانية الكيميائية، والنظرية الضبابية، ووضع العلامات على الرسوم البيانية. وقد نشر أكثر من 65 مقالة بحثية (عامل تأثير مرتفع) في العديد من المجلات الدولية المرموقة. علاوة على ذلك، فهو مراجع لمجلة ``الرياضيات التطبيقية المنفصلة``، ومجلة ``الرياضيات التطبيقية والحوسبة``، ومجلة ``IEEE Access``، ومجلة ``الجبر الخطي والمتعدد الخطوط``، ومجلة ``الرياضيات المنفصلة والخوارزميات والتطبيقات (DMAA)، ومجلة ``الحاسبات والمواد والمستمرات``، وغيرها الكثير

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المؤهلات الأكاديمية

Ph.D، Central China Normal University, Wuhan, China، 2020

M.Phil، GC University, Lahore, Pakistan، 2015

BS(Hons.)، GC University, Lahore, Pakistan، 2012

أنشطة التدريس

Graph theory and its applications

Spectral graph theory

Algebraic graph theory

Matrix theory

Advance Numerical Analysis

Graph labelling

Advance Algebra

Modern graph theory

Group Theory-II

Discrete structure

Vector and tensor analysis

Algebra III

Operations Research

Mathematical Methods

Rings and Fields

Integral Equations

Group Theory-I

Introduction to Statistics

Ordinary Differential Equations

Elementary graph theory

Probability Theory

Mathematical Spaces

Numerical Analysis I

Calculus III

Complex Analysis

Topology-I

Functional Analysis

Number Theory

الأنشطة البحثية

الاهتمامات البحثية ـ

Spectral Analysis of graphs

Topological Indices

Extremal problems of graphs

Chemical graph theory

Graph Labeling

Fuzzy Graph theory

Algebraic graph theory

Machine learning

1. Asad Ullah, Hameed Ali, Shahid Zaman, Summeira Meherban ``A comparative analysis of different topology description methods for 3D grains in polycrystalline microstructures`` Conference: 1st International Conference on Mathematics and Applied SciencesAt: Mehran UET, Shaheed Z.A. Bhutto Campus Khairpur Mir's Sindh Pakistan ، Conference: 1st International Conference on Mathematics and Applied Sciences ، Mehran UET, Shaheed Z.A. Bhutto Campus Khairpur Mir's Sindh Pakistan ، 28/09/2023

2. Anila Hamraz, Asad Ullah, Shahid Zaman ``Topological Characterization of SiliconCarbon molecular structures with respect to neighborhood molecular descriptors and entropy measures، 5th International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS-2023، 17/07/2023

3. Salima Salman, Asad Ullah, Shahid Zaman ``Various Resistance distance indices of bipartite graphs with respect to diameter two and their sharp bounds، 5th International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS-2023)، Peshawer, Pakistan ، 14/07/2023

مقال:

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2. 2024 [Asad Ullah, Muhammad Nazir, Shahid Zaman, Y S Hamed and Safina Jabeen ``Fractal configurations of zigzag hexagonal type coronoid molecules: Graph-theoretical modeling and its impact on physicochemical behavior`` Physica Scripta](#)

3. 2024 [Wakeel Ahmed, Tamseela Ashraf, Dalal AlMutairi, Shahid Zaman, Shakeel Ahmed, Huma Ehsan ``A Deep Dive into Machine Learning: The Roles of Neural Networks and Random Forests in QSPR Analysis`` BioNanoScience](#)

4. 2024 [Abdul Hakeem, Asad Ullah, Shahid Zaman, Y. S. Hamed, Melaku Berhe Belay ``Computational insights into favonoid molecular structures and their ``QSPR modeling via degree based molecular descriptors`` Chemical Papers](#)

5. 2024 [Muhammad Danish, Tehreem Liaquat, Shahid Zaman, Parvez Ali ``A Quantitative Structure-Property Relationship approach to predict the biological activities of newly discovered anti-cancer agents with applications in Implications of Drug Development`` Journal of Micromechanics and Molecular Physics](#)

6. 2024 [Shahid Zaman, Sadaf Rasheed & Ahmed Alamer `` A quadratic regression model to quantify certain latest corona treatment drug molecules based on coindices of M-polynomial`` The Journal of Supercomputing](#)

7. 2024 [Wakeel Ahmed, Shahid Zaman, Eizzah Asif, Kashif Ali, Emad E. Mahmoud & Mamo Abebe Asheboss ``Exploring the role of topological descriptors to predict physicochemical properties of anti-HIV drugs by using supervised machine learning algorithms `` BMC Chemistry](#)

8. 2024 [Shahid Zaman, K. H. Hakami, Sadaf Rasheed & Fekadu Tesgera Agama. ``Reduced reverse degree-based topological indices of graphyne and graphdiyne nanoribbons with applications in chemical analysis.`` Scientific Reports 547(2024](#)

9. 2024 [Shahid Zaman, Ahmed Raza, Asad Ullah ``Some new version of resistance distance-based topological indices of complete bipartite networks.`` The European Physical Journal Plus](#)

10. 2024 Shahid Zaman, Asad Ullah, Rabia Naseer, Kavi Rasool. ``Mathematical Concepts and Empirical Study of Neighborhood Irregular Topological Indices of Nanostructures TUC4C8 p , q and GTUC p , q.`` Journal of Mathematics

11. 2024 Ali N. A. Koam, Ali Ahmad, Shahid Zaman, Ibtisam Masmali, and Haleemah Ghazwani. ``Fundamental aspects of the molecular topology of fuchsine acid dye with connection numbers`` The European Physical Journal E

12. 2024 Shahid Zaman, Muhammad Usamah Majeed, Wakeel Ahmed, Maliha Tehseen Saleem ``On Neighborhood Eccentricity-Based Topological Indices with QSPR Analysis of PAHs Drugs.`` Measurement Interdisciplinary Research and Perspectives

13. 2024 Shahid Zaman, Sonia Zafar, Asad Ullah, Muhammad Azeem. ``Computational and molecular characterization of Chitosan derivatives by means of graph-theoretic parameters .`` Partial Differential Equations in Applied Mathematics

14. 2024 Zunaira Kosar, Shahid Zaman, Asad Ullah, Muhammad Kamran Siddiqui, Melaku Berhe Belay. ``Computation of molecular description of supramolecular Fuchsine model useful in medical data.`` Scientific reports

15. 2024 Muhammad Salman, Asad Ullah, Shahid Zaman, Emad E. Mahmoud, Melaku Berhe Belay. ``3D molecular structural modeling and characterization of indium phosphide via irregularity topological indices.`` BMC Chemistry

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18. 2024 Guofeng Yu, Shahid Zaman, Mah Jabeen, Xuewu Zuo. ``The study of pentagonal chain with respect to schultz index, modified schultz index, schultz polynomial and modified schultz polynomial.`` PLOS ONE

19. 2024 Wakeel Ahmed, Shahid Zaman, Farhana Khalid ``Analyzing Polycyclic Aro-matic Hydrocarbons using Topological Indices and QSPR Analysis to Reveal Molecular Complexity`` Journal of Micromechanics and Molecular Physics

20. 2024 Asifa Tassaddiq, Wakeel Ahmed, Shahid Zaman, Asma Raza, Usman Islam, Kwara Nantomah, ``A Modified Iterative Approach for Fixed Point Problem in Hadamard Spaces`` Journal of Function Spaces

21. 2024 Wakeel Ahmed, kashif Ali, Shahid Zaman, Asma Raza ``Molecular insights into anti-Alzheimer's drugs through predictive modeling using linear regression and QSPR analysis`` Modern Physics Letters B

22. 2024 Asad Ullah, Safina Jabeen, Shahid Zaman, Anila Hamraz, Summeira Meherban,``Predictive potential of K-Banhatti and Zagreb type molecular descriptors in structure–property relationship analysis of some novel drug molecules`` Journal of the Chinese Chemical Society

23. 2024 Summeira Meharban, Asad Ullah, Shahid Zaman, Anila Hamraz, Abdul Razaq ``Molecular structural modeling and physical characteristics of anti-breastcancer drugs via some novel topological descriptors and regression models`` Current Research in Structural Biology

24. 2024 Asma Jabeen, Shahzad Ahmad, Shahid Zaman, ``The study of regression model based on CoM-polynomial in blood cancer drug properties`` Partial Differential Equations in Applied Mathematics

25. 2024 Mimoon Ismael, Shahid Zaman, Kashif Elahi, Ali N.A. Koam, Ansa Bashir, ``Analytical

Expressions and Structural Characterization of Some Molecular Models Through Degree Based Topological Indices`` Mathematical Modelling of Engineering Problems

26. 2024 Asad Ullah, Salima Salman, Shahid Zaman. ``Resistance distance and sharp bounds of two-mode electrical networks.`` Physica Scripta

27. 2024 Shahid Zaman, Mahnoor Mushtaq, Muhammad Danish, Parvez Ali, Sadaf Rasheed.``Topological Characterization of Some New Anti-Viral Drugs for Cancer Treatment.``BioNanoScience

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31. 2024 Wakeel Ahmed, Kashif Ali, Shahid Zaman, Farooq Ahmad, and Mamo Abebe Ashebo. ``Molecular Insights into Anti-Alzheimer's Drugs Through Eccentricity-Based Predictive Mathematical Modeling Using Regression and QSPR Analysis.`` Journal of Molecular and Engineering Materials

32. 2024 Xiaofang Li, Muzafar Jamal, Asad Ullah, Emad E. Mahmoud, Shahid Zaman & Melaku Berhe Belay. ``Computational insights into zinc silicate MOF structures: topological modeling, structural characterization and chemical predictions.`` Scientific Reports

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35. 2023 Shahid Zaman, Aisha Kamboh, Asad Ullah and Jia-Bao Liu. ``Development of some novel resistance distance based topological indices for certain special types of graph networks.`` Physica Scripta

36. 2023 Xiaodong Yu, Shahid Zaman, Asad Ullah, Ghulamullah Saeedi and Xiujun Zhang ``Matrix Analysis of Hexagonal Model and Its Applications in Global Mean-First-Passage Time of Random Walks`` IEEE ACCESS

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39. 2023 Shahid Zaman, Wakeel Ahmed, Atash Sakeena, Kavi Rasool & Mamo Abebe Ashebo. ``Mathematical modeling and topological graph description of dominating David derived networks based on edge partitions.`` Scientific Reports

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41. 2023 Shahid Zaman, Hafiza Sana Arbab Yaqoob, Asad Ullah & Mariam Sheikh. ``QSPR Analysis of Some Novel Drugs Used in Blood Cancer Treatment Via Degree Based Topological Indices and Regression Models.`` Polycyclic Aromatic Compounds

42. 2023 Shahid Zaman, Mehwish Jalani, Asad Ullah, Wakeel Ahmad & Ghulamullah Saeedi. ``Mathematical analysis and molecular descriptors of two novel metal–organic models with chemical applications.`` Scientific Reports

43. Shahid Zaman, Zunaira Kosar, Saif Ullah, Adeela Nawaz, ``Mathematical aspects and molecular descriptors for anti-tumour and anti-COVID drugs medications`` Molecular Physics 2023

44. Shahid Zaman, Mehwish Jalani, Asad Ullah, Mubashir Ali, Tayyba Shahzadi ``On the topological descriptors and structural analysis of cerium oxide nanostructures`` Chemical Papers 2023

45. Shahid Zaman, Muhammad Salman, Shahzad Ahmad, Asad Ullah and Mohammed Salaheldeen Abdelgader Abas. ``Three-Dimensional Structural Modelling and Characterization of Sodalite Material Network concerning the Irregularity Topological Indices.`` Journal of Mathematics 2023

46. Asad Ullah, Shahid Zaman, Arshad Hussain, Asma Jabeen, Melaku Berhe Belay ``Derivation of mathematical closed form expressions for certain irregular topological indices of 2D nanotubes`` Scientific reports 2023

47. Asad Ullah, Shahid Zaman, Anila Hamraz, Muniba Muzammal . ``On the construction of some bioconjugate networks and their structural modeling via irregularity topological indices.`` The European Physical Journal E 2023

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49. Xiujun Zhang, Zainab Saeed Bajwa, Shahid Zaman, Sidra Munawar & Dan Li ``The study of curve fitting models to analyze some degree-based topological indices of certain anti-cancer treatment`` Chemical Papers 2023

50. Asad Ullah, Zohra Bano , Shahid Zaman. ``Computational aspects of two important biochemical networks with respect to some novel molecular descriptors.`` Journal of Biomolecular Structure and Dynamics 2023

51. Asad Ullah, Shams udin, Shahid Zaman, Anila Humraz. ``Zagreb connection topological descriptors and structural property of the triangular chain structures.`` Physica Scripta 2023

52. Abdul Hakeem Phulpoto, Asad Ullah, Shahid Zaman ``Computation of some important degree based topological indices for graphyne and Zigzag graphyne nanoribbon`` Molecular Physics 2023

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54. Shahid Zaman and He X, . ``Relation between the inertia indices of a complex unit gain graph and those of its underlying graph.`` Linear and Multilinear Algebra 2022

55. Shahid Zaman. ``Spectral analysis of three invariants associated to random walks on rounded networks with 2n-pentagons.`` International Journal of Computer Mathematics 2022

56. Shahid Zaman, Ali N. A. Koam, Ali Al Khabyah, Ali Ahmad ``The Kemeny's Constant and Spanning Trees of Hexagonal Ring Network`` Computers, Materials & Continua 2022

57. Ali Al Khabyah, Shahid Zaman, Ali N. A. Koam, Ali Ahmad and Asad Ullah. ``Minimum Zagreb Eccentricity Indices of Two-Mode Network with Applications in Boiling Point and Benzenoid Hydrocarbons.`` Mathematics 2022

58. Javeria Dinar, Zahid Hussain, Shahid Zaman, Shams Ur Rehaman ``Wiener index for an intuitionistic fuzzy graph and its application in water pipeline network`` Ain Shams Engineering Journal 2022

59. Shahid Zaman, Mehwish Jalani,Asad Ullah and Ghulamullah Saeedi ``Structural Analysis and Topological Characterization of Sudoku Nanosheet``. Journal of Mathematics 2022

60. Asad Ullah, Muhammad Qasim, Shahid Zaman and Asad Khan. ``Computational and comparative aspects of two carbon nanosheets with respect to some novel topological indices.`` 2022

Ain Shams Engineering Journal

61. 2022 Asad Ullah, Aurang Zeb, Shahid Zaman ``A new perspective on the modeling and topological characterization of H-Naphtalenic nanosheets with applications`` Journal of Molecular Modeling

62. 2022 Asad Ullah, Shamsudin, Shahid Zaman, Anila Hamraz, Ghulamullah Saeedi ``Network-Based Modeling of the Molecular Topology of FuchsineAcid Dye with Respect to Some Irregular Molecular Descriptors`` Journal of Chemistry

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64. 2021 Shahid Zaman and Ali Akbar. ``On the Connected Graphs Having Maximum Connective Eccentricity Index.`` Journal of Applied Mathematics and Computing

65. 2021 Shahid Zaman, Fouad A. Abolaban, Ali Ahmad and Muhammad Ahsan Asim.``Maximum H-index of bipartite network with some given parameters.`` AIMS Mathematics

66. 2021 Shahid Zaman, Jawad Alam and Asma Jabeen. ``SUPER FACE MAGIC LABELING OF (SUBDIVIDED PRISM GRAPH.`` Jordan Journal of Mathematics and Statistics (JJMS

67. 2020 Li Q, Shahid Zaman, Sun.W and Jawad Alam. ``Study on the normalized Laplacian of a penta-graphene with applications.`` International Journal of Quantum Chemistry,

68. 2020 Wang.G, Yan.L, Shahid Zaman and Zhang.M. ``The connective eccentricity index of graphs and its applications to octane isomers and benzenoid hydrocarbons.``International Journal of Quantum Chemistry

الخبرة الإدارية

Head Department of Mathematics - University of Sialkot-Pakistan :2017 - 2016

PT member of Quality Enhancement Cell (QEC) - University of Sialkot-Pakistan :2017 - 2015

Member of discipline committee - University of Sialkot-Pakistan :2017 - 2015

Program Manager of Physical Science - University of Sialkot-Pakistan :2016 - 2015

الجوائز والتقدير

2022 • HEC Approved PhD Supervisor, Ref. HEC/HRD/ASA/2022/91123.

2019 • Achieved Excellent CCNU International Student Award, for the year 2019 in Central China Normal University Wuhan-China.

2017 • Awarded Chinese Government Scholarship, for the year 2017

2012 • Awarded HEC Pakistan Scholarship in BS level, at GC University, Lahore Pakistan

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