

# Dr. NASIR ALI



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## ➤ Education

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### **COMSATS University Islamabad, Lahore Campus**

*PhD Mathematics*

Lahore, Punjab  
Feb 2021 – April 2025

### **COMSATS University Islamabad, Vehari Campus (3.56/4)**

*MS Mathematics*

Vehari, Punjab  
Feb 2019 – Feb 2021

## ➤ Professional Experience

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### **COMSATS University Islamabad, Vehari Campus**

COMSATS aims to reduce the ever-growing gap between the developed and developing world through useful applications of science and technology

Vehari, Pakistan  
Jan 2023-up to date

*Lecturer of Mathematics:*

- Enhancement of Teaching skills: Teaching in COMSATS enables me to learn and adopt modern teaching skills.

### **AMAL ACADEMY**

Education startup funded by Stanford University that teaches professional skills To students and corporations

Lahore, Pakistan  
Dec 2020 – Feb 2021

*Career-Prep Fellow:*

- *Communication:* Completed a competitive written application and interview process to be selected from over 4500 applicants for intensive 3-month Fellowship funded by Stanford University
- *Skills development:* Investing 150 hours in order to develop business skills (e.g., communication, leadership, problem solving, teamwork, etc.) that will help me make a deeper impact on the job

### **University of Education**

The University of Education is a public research university.

Vehari, Pakistan  
Oct 2018- Aug 2020

*Visiting Lecturer of Mathematics:*

- Advance Teaching skills: Teaching in research institute enable me to learn the advance mathematics computing skills and some software's (e.g., MS Office, MATLAB, MAPLE)

### **Govt. Post Graduate College**

Govt Post Graduate college is affiliated with BISE Multan.

Vehari, Pakistan  
Oct 2018 – Sep 2019

*CTI Mathematics:*

- *Skills development:* Spending almost a year with almost 70+ students in each class developed teaching skills (e.g., Pressure absorbing, leadership, problem solving, teamwork, etc.) that will help me make a deeper impact on the job.

## ➤ Academic Experience

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### **Ph.D. Thesis**

COMSATS University Islamabad, Lahore Campus

Vehari, Pakistan  
Feb 2021 – Present

*Researcher:*

- *Area of Research:* Graph Theory
- *Research Topic:* On Study of some Distinguishing Parameters for Graphs Associated to Algebraic Structures

## MS Thesis

Completed 6 credit hours thesis work (COMSATS University Islamabad, Vehari Campus)

Vehari, Pakistan

Jan 2020 – Jan 2021

### Researcher:

- *Area of Research:* Fractional Calculus
- *Research Topic:* Some Modified Numerical Method Using Fractional Derivative for Solving Nonlinear Equations
- *Computing Software and Research Skills:* During research learn many software's that are necessary for a mathematics teacher (e.g., Scientific Workplace, Latex, MS Word, etc.) and research skills (e.g., Books searching, Journals details, action research, etc.)

### ➤ Projects/Publications

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#### Research Paper

1. **Ali, N.**, Siddiqui, H. M. A., & Qureshi, M. I. (2025). Characterizing Rings Based on Resolvability in Associated Compressed Zero Divisor Graphs. *Journal of Algebra and its Applications*, doi: 10.1142/S021949882541004X.
2. **Ali, N.**, Siddiqui, H. M. A., Qureshi, M. I., Abdalla, M. E. M., EL-Gawaad, N. A., & Tolasa, F. T. (2024). On Study of Multiset Dimension in Fuzzy Zero Divisor Graphs Associated with Commutative Rings. *International Journal of Computational Intelligence Systems*, 17(1), 298.
3. **Ali, N.**, Sadiqa, A., Shahzad, M. A., Imran Qureshi, M., Siddiqui, H. M. A., ABDALLAH, S. A. O., & EL-Gawaad, A. Secure Communication in the Digital Age: A New Paradigm with Graph-Based Encryption Algorithms. *Frontiers in Computer Science*, 6, 1454094.
4. Shahzad, M. A., **Ali, N.**, Abdallah, S. A. O., & EL-Gawaad, N. A. (2024). On Study of Some Bounds for Fault-Tolerant Metric Dimension and Adjacency Fault-Tolerant Resolving Set of Corona Product Graphs. *Discrete Mathematics, Algorithms and Applications*.
5. **Ali, N.**; Siddiqui, H.M.A.; Qureshi, M.I.; Abdallah, S.A.O.; Almahri, A.; Asad, J.; Akgül, A. Exploring Ring Structures: Multiset Dimension Analysis in Compressed Zero-Divisor Graphs. *Symmetry* **2024**, 16, 930. <https://doi.org/10.3390/sym16070930>
6. Raji, T., **Ali, N.**, Hanchalu, G., Tolasa, F. T., & Seboka, B. (2024). Exploring  $\alpha$ - $\psi$ - $\varphi$  contractive mapping: novel fixed point theorems in complete b-metric spaces. *F1000Research*, 13, 566.
7. **Ali, N.**, Siddiqui, H. M. A., Riaz, M. B., Qureshi, M. I., & Akgül, A. (2024). A graph-theoretic approach to ring analysis: dominant metric dimensions in zero-divisor graphs. *Heliyon*.
8. **Ali, N.**, Kousar, Z., Safdar, M., Safdar, J., & Tolasa, F. T. (2024). A mathematical analysis of concealed non-Kekulean benzenoids and subdivided networks in associated line graphs. *Acadlore Trans. Appl Math. Stat*, 2(2), 72-80.
9. **Ali, N.**, (2024). Algorithm for Visualization of Zero Divisor Graphs of the Ring  $\mathbb{Z}_n$  Using MAPLE Coding. *Open Journal of Discrete Mathematics*, 14(1), 1-8.
10. **Ali, N.**, Kousar, Z., Safdar, M., Tolasa, F. T., & Suleiman, E. (2023). Mapping Connectivity Patterns: Degree-Based Topological Indices of Corona Product Graphs. *Journal of Applied Mathematics*, 2023.
11. **Ali, N.**, Waseem, M., Safdar, M., Akgül, A., & Tolasa, F. T. (2024). Iterative solutions for nonlinear equations via fractional derivatives: adaptations and advances. *Applied Mathematics in Science and Engineering*, 32(1), 2333816.
12. Dharmalingam, K. M., Jeeva, N., **Ali, N.**, Al-Hamido, R. K., Fadugba, S. E., Malesela, K., ... & Qousini, M. (2024). Mathematical analysis of Zika virus transmission: exploring semi-analytical solutions and effective controls. *Commun. Math. Biol. Neurosci.*, 2024, Article-ID.
13. Jeeva, N., Dharmalingam, K. M., **Ali, N.**, Sayed-Ahmed, M. Z., Radwan, R. M., El-Bahkiry, H. S., ... & Tolasa, F. T. (2024). Epidemiology simulation: numerical techniques for analyzing type 2 diabetes model and its prevention measures. *Commun. Math. Biol. Neurosci.*, 2024, Article-ID.
14. Safdar, M., Mushtaq, T., **Ali, N.**, & Akgül, A. (2023). On study of flow features of hybrid nanofluid subjected to oscillatory disk. *International Journal of Modern Physics B*, 2450356.
15. Mahboob, A. B. I. D., Hussain, T. A. S. W. E. R., Akram, M. I. S. B. A. H., Mahboob, S. A. J. I. D., **Ali, N.** A. S. I. R., & Raza, A. (2020). Characterizations of chevalley groups using order of the finite groups. *Journal of Prime Research in Mathematics*, 16(1), 46-51.

### ➤ Research Student List.

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Following students have done the final year projects under my supervision

Vehari, Pakistan

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|-------|--|-----------|
| i.    | Mubarrah Tariq and Shrish Riaz (Topic: On dominant metric dimension of graphs)   | 2022-2023 |
| ii.   | Riffat Nazir and Nabeela Zulfiqar (Topic: Studying algebraic structures)         | 2022-2023 |
| iii.  | Rimsha Munir and Ruqayya Bibi (Topic: Zero divisor graphs and their properties)  | 2022-2023 |
| iv.   | Gulam Yaseen and M. Asif (Topic: Study of Compressed zero divisor graphs)        | 2023-2024 |
| v.    | Samiya Yaseen, M. Irfan and Iqra Batool (Topic: A Survey on zero divisor graphs) | 2023-2024 |
| vi.   | Ayesha Sadiqa and M. Amir (Topic: Cryptography with the help of graphs)          | 2023-2024 |
| vii.  | Gulam Yasin and M. Asif (Topic: Dominant metric dimension in CZDG)               | 2023-2024 |
| viii. | Mazhar Ahmad and M. Touseef Haider (Topic: Graph Based Cryptography)             | 2024-2025 |
| ix.   | Muhammad Irfan and Abid Hussain (Topic: Matrix Based Cryptography)               | 2024-2025 |
| x.    | Iqbal Batool and Nusrat Bibi (Topic: Graph and Matrix Based Cryptography)        | 2024-2025 |
| xi.   | Ezza Shehzad and Fatima Parveen (Topic: RSA Based Cryptography)                  | 2024-2025 |

➤ Extracurricular & Volunteer Experience

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**One Day Symposium on Pure and Applied Mathematics** Vehari, Pakistan  
 – Secretary Symposium organizer: Managed the organizing work of symposium 2019-2020

➤ Honors and Awards

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**ACADEMIC SCHOLARSHIPS** Vehari, Pakistan  
 – Received Yearly merit-based academic scholarship from University of Education. 2014-2018

**ONLINE COURSES** Vehari, Pakistan  
 – Training Certificate in Digital Literacy and Freelancing 2019-2020

**JOURNALS REVIEWER** International  
 – European Journal of Pure and Applied Mathematics International  
 – Chaos Theory and Applications International  
 – Alexandria Journal of Engineering International  
 – Journal of Applied Mathematics International  
 – Asian-European Journal of Mathematics (AEJM) International  
 – Information Science International  
 – Physica Scripta International  
 – Discrete Mathematics, Algorithms and Applications (DMAA) International  
 – Neural Computing and Applications (NCAA) International  
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**AWARDS AND CERTIFICATIONS** Vehari, Pakistan  
 – E-Rozgar Graphic Designing Graduation certificate 2021  
 – Received Certificate of Recognition presented to LSBE Graduate (Life skill-based education) 2010  
 – Received merit-based Laptop Award from Chief Minister Punjab 2016  
 – Received Excellence certificate, 2<sup>nd</sup> position in Chief Minister’s speech contest. 2008