

Muhammad Awais

Aspiring Mathematician

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As a mathematics student, I am passionate about unraveling the mathematics behind algorithms, conducting research to enhance accuracy, and solving complex problems with a blend of mathematical principles and modern algorithms.

EDUCATION

Bachelor of Mathematics Namal University Mianwali

10/2020 - Present Mianwali, Pakistan CGPA 3.43

Courses

- Machine Learning
- Probability & Statistics
- Intro. to Programming (python)
- Linear Algebra
- Multi Variate Calculus
- Condensed Matter Physics

WORK EXPERIENCE

Research Exposure

Namal University, Mathematics Department

01/2023 - 10/2023

Achievements/Tasks

- Led a research group that analyzed theoretical results, recommended future materials for applications, and produced four research articles in the field of material science in reputed international journals.

Contact : DR. ZIA UR REHMAN (ASSISTANT PROFESSOR) -
zia.rehman@namal.edu.pk

Head of Mathematics Corner

Namal Mathematics Department

10/2021 - 08/2022

Tasks

- Fostering interdisciplinary discussions and engaging talks by students and teachers on intriguing mathematics topics.

Teacher Assistant

Namal Mathematics Departmen

03/2023 - Present

Tasks

- Experienced as a TA for Calculus I, Physics I, Linear Algebra II, Probability and Statistics II, and Condensed Matter Physics courses.

ORGANIZATIONS

Namal Mathematical Society(NMS) (01/2022 - 01/2023)

General Secretary

Namal Society for Social Impact(NSSI)

(02/2021 - 12/2021)

Co-head of Education Wing

SKILLS

Scientific Writing

Python

Material simulations

Image Processing

Latex

Data visualization

Data Analysis

Event Manager

UNDERGRADUATE PROJECT

Non-Negative Matrix Factorization; with applications in Image-Processing (10/2023 - Present)

- The project involves exploring the mathematics of NMF and applying Python and machine learning techniques to real-world medical image data, with a specific emphasis on image compression and segmentation.

CERTIFICATES

Pakistan Mathematics competition
(04/2022 - 04/2022)

(Sukkur IBA University), Pakistan Calculus Contest (2022) runner
Pakistan Mathematical Olympiad (2022) runner up

All Pakistan Math Circles Workshop (LUMS)
(06/2022 - 06/2022)

(LUMS), Participates in All Pakistan Math Circles Workshop in preparation for conducting Maths Circles in government schools under the STEAM Pakistan university-school partnership.

PUBLICATIONS

Hydrogen Storage Capacity of Lead-Free Perovskite NaMTH₃ (MT=Sc, Ti, V): A DFT Study (01/2024)

International Journal of Energy Research: Hindawi

Ab initio insight into the physical properties of MgXH₃ (X = Co, Cu, Ni) lead-free perovskite for hydrogen storage application (10/2023)

Environmental Science and Pollution Research

LANGUAGES

English

Full Professional Proficiency

Chinese

Elementary Proficiency

Urdu

Native or Bilingual Proficiency

Punjabi

Native or Bilingual Proficiency

INTERESTS

Videography

Singing

Cricket

wanderlust