

Rizwan Ali

Date of birth: 25/10/2001 | **Place of birth:** Karachi, Pakistan | **Nationality:** Pakistani | **Sex:** Male | **Phone:**

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Address: Malir, Karachi, Pakistan (Home) | **Address:** Nankai Univeristy, Jinnan Campus, Tianjin, China (Work)

ABOUT MYSELF

Environmental scientist completing an MSc in Environmental Science at Nankai University (CGPA: 3.71/4), specializing in advanced phytoremediation technologies. My research investigates plant-based systems for efficient removal of emerging contaminants. Through my academic research and work at WWF Pakistan, I have developed expertise in designing and optimizing nature-based remediation systems. I seek PhD opportunities to further develop innovative phytoremediation approaches for complex pollution scenarios, combining laboratory research with practical field applications.

WORK EXPERIENCE

 **COLLEGE OF ENVIRONMENTAL SCIENCE AND ENGINEERING, NANKAI UNIVERSITY – TIANJIN, CHINA**

RESEARCH ASSISTANT – 09/2023 – 06/2026

- Conducting lab/field studies on bioremediation & phytoremediation of soil/water pollutants (heavy metals, organics, emerging contaminants).
- Optimizing experiments to assess impacts of environmental factors (pH, temperature, microbial activity) on remediation efficiency.
- Analyzing pollutants using HPLC, GC-MS, ICP-MS, FTIR, and other analytical techniques.
- Performing meta-analysis/systematic reviews to evaluate global remediation trends.
- Managing lab safety, sample preparation, and QA/QC protocols for experiments.
- Assisting in field sampling and pilot-scale trials at contaminated sites.
- Publishing research in peer-reviewed journals.

 **WWF – KARACHI, PAKISTAN**

PROJECT OFFICER - FRESHWATER PROGRAMME – 02/2023 – 05/2023

- Spearheaded the installation and monitoring of sustainable water solutions, including Floating Treatment Wetlands, Rainwater Harvesting Systems, Ablution Water Reuse Systems, and Drinking Water Filtration Plants, ensuring efficient water resource management.
- Oversaw procurement of field materials to support project implementation while adhering to budgetary and sustainability guidelines.
- Developed engaging presentations and infographics to enhance project visibility and stakeholder engagement.
- Prepared comprehensive reports in compliance with organizational and donor standards, ensuring accurate documentation of progress and impact.
- Maintained meticulous records of water replenishment targets, tracking monthly performance metrics to align with conservation goals.

EDUCATION AND TRAINING

01/09/2023 – 01/06/2026 Tianjin, China

MASTERS OF ENVIRONMENTAL SCIENCE Nankai Univeristy

Major courses: Technical Progress of Environmental Science, Environmental Analytical Advances, Ecotoxicology and Environmental Risk Assessment, Emerging Chemicals: Environmental Behavior and Human Exposure, Environmental Implications and Impact Assessment, Environmental Engineering, Environmental Management, Toxicological Chemistry, and Microbial Ecology.

Research Areas: Bioremediation, Phytoremediation, New pollution removal, Environmental factors, Meta-analysis, Soil remediation, Water remediation.

Laboratory: The key laboratory of pollution Processes and Environmental Criteria, Ministry of Education, China.

Website <https://www.nankai.edu.cn/> | **Field of study** Environmental sciences | **Final grade** 3.71/4

01/01/2018 – 01/01/2022 Karachi, Pakistan

BACHELORS OF ENVIRONMENTAL SCIENCE Federal Urdu University of Arts Science & Technology

Website <https://fuuast.edu.pk/> | **Field of study** Environmental sciences | **Final grade** 3.36/4

LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
CHINESE	A1	A1	A1	A1	A1
BALTI	C2	A1	C2	C2	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

SKILLS

Ecological restoration | Aquatic toxicology | Phytoremediation | Meta-analysis | Soil remediation | Water remediation | Data analysis | Laboratory techniques | Aquatic ecology | Technical and non-technical writing

PUBLICATIONS

2025
Research progress of using ornamental plants to cope approach environmental pollutants, a breakthrough of bioremediation technology

This review paper explores ornamental plants as sustainable tools for phytoremediation, effectively removing pollutants from soil, water, and air without entering the food chain. It highlights their physiological and molecular mechanisms for pollutant tolerance and uptake, along with ecological benefits like urban biodiversity enhancement and socio-economic advantages such as green jobs and commercial by-products. Key challenges include optimizing stress resistance, leveraging plant-microbe interactions, and managing biomass. Additionally, these plants support carbon neutrality by sequestering CO₂ while detoxifying contaminants, positioning them as vital for climate-smart remediation strategies.

Authors: Rizwan Ali, Jianv Liu*, Gao Minghao, Jiayin Gao and Li Yun | **Journal Name:** Under Review

2025
Joint Omics Analysis to Reveal the Tolerance Mechanisms of Mirabilis Jalapa L. To Cd and Tph Pollution Under Elevated CO2

This study examines how Mirabilis jalapa L. removes cadmium (Cd) and total petroleum hydrocarbons (TPH) under normal and elevated CO₂ conditions. It identifies key defense-related genes and functional pathways under combined Cd, TPH, and high CO₂ stress while uncovering adaptive molecular mechanisms using metagenomic and transcriptomic analyses.

Authors: Jianv Liu*, Yufang Xiao, Qinyuan Mei, Minghao Gao, Yun Li and Rizwan Ali | **Publisher:** Under Review

2025
High atmospheric CO2 rather than microplastic directly affects ecological response of submerged plant systems in eutrophic water

Authors: Minghao Gao, Jianv Liu*, Yun Li, Jiayin Guo and Rizwan Ali | **Publisher:** Under Review

HONOURS AND AWARDS

Chinese Government Scholarship - CSC – Chinese Government

- Awarded the prestigious CSC scholarship, a highly competitive grant offered by the Chinese Ministry of Education to outstanding international students, covering full tuition, accommodation, living stipend, and comprehensive medical insurance.
- Selected among top global candidates based on academic merit, research potential, and leadership qualities to pursue a Master’s in Environmental Science at Nankai University, a Double First-Class institution and a member of China’s elite Project 985 universities.

Al-Kauser Merit Scholarship – Al-Kauser

- Awarded the prestigious Al-Kauser Merit Scholarship (Semesters 4–8) in recognition of outstanding academic performance, granted to top-ranking undergraduate students.

HOBBIES AND INTERESTS

Hobbies & Interests

Nature & outdoor exploration & photography
Volunteering for environmental & social causes
Language & cultural exploration
Cooking pakistani cuisine
Reading books especially financial literature

VOLUNTEERING

2025 – CURRENT Tianjin, China

The Photography and Drone Association Nankai Univeristy

- Spearheading drone technology and nature photography workshops at Nankai University to promote STEM education among high school students.
- Organizing interactive sessions, engaging students in hands-on drone piloting and environmental photography.
- Recognizing for effectively bridging scientific learning with creative expression, inspiring youth to explore interdisciplinary fields.
- Strengthening community outreach by fostering scientific curiosity and artistic skills through collaborative educational initiatives.

01/01/2018 – CURRENT Pakistan

Pakistan Sustainable Development Forum

- Spearheaded environmental awareness campaigns and sustainable development initiatives at FUUAST, Karachi.
 - Organized the "Friday for Future" Climate Peace Walk at FUUAST, mobilizing participants for climate action.
 - Recognized for leadership, dedication, and impactful contributions toward the organization's mission.
 - Strengthened community engagement through advocacy and youth empowerment programs.
- "Volunteering may not make you a millionaire in wealth, but it rewards you with a billion blessings."

2018 – 2022 Karachi

The Core Aid

- Assisted in coordinating emergency blood donations for underprivileged individuals, ensuring timely access to critical medical support.
- Facilitated community initiatives during Ramadan, organizing iftar distributions to help those in need break their fast.
- Contributed to lifesaving humanitarian efforts by supporting logistical operations and donor engagement.

SPORTS & CERTIFICATES

Nankai University Mental Health Games 2025

- Third position in the overall five different games with slogan 'The everlasting joy of Nankai', at Nankai University, 2025 Games

Nankai University Spring Games 2025

- Second position in the five-person six-foot race at the International School of Education and the Chinese Academy of Language and Culture, Nankai University, 2025 Spring Games

Nankai University Spring Games 2024

- Third position in the tug-of-war competition at the International School of Education and the Chinese Academy of Language and Culture, Nankai University, 2024 Spring Games

Best Organization Award 2024

- In the 2024 'Fun Sports, Heart for the Future' Nankai University Mental Health Sports Meeting, won the Best Organisation Award