



# CURRICULUM VITAE

**Name: Dr. Waheed Ullah Khan**

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## **ACADEMIC QUALIFICATIONS:**

2019: **Ph.D. Environmental Sciences. Thesis Title:** Role of Metal Tolerant Rhizobacteria on Phytoremediation of Cd and Ni Contaminated Soils by *Catharanthus roseus* (L.) G. Don.

College of Earth and Environmental Sciences, University of the Punjab, Lahore.

2013: **M. Phil. Environmental Sciences. Thesis Title:** Screening for Hyper-accumulator Ornamental Plants suitable for Phyto-extraction of Tannery Solid Waste

College of Earth and Environmental Sciences, University of the Punjab, Lahore.

2011: **M. Sc. Environmental Sciences. Thesis Title:** Environmental Impact Assessment of Allai Khwar Hydro-electric Power Plant

College of Earth and Environmental Sciences, University of the Punjab, Lahore (**1<sup>st</sup> Position holder**).

## **TEACHING ASSIGNMENTS AT DEPARTMENT OF ENVIRONMENTAL SCIENCE, IUB:**

### **Courses**

1. Environmental Chemistry (ES-401)
2. Introduction to Earth Sciences (ES-302)
3. Basic Chemistry (CHM-301)
4. Environmental Microbiology (ES-404)
5. Introduction of Environmental Science
6. Occupational Safety and Health (ES-713)

## **TEACHING ASSIGNMENTS AT CEES, UNIVERSITY OF THE PUNJAB, LAHORE:**

### **Courses**

1. Advances in Environmental Research (Ph.D Env. Sci.)
2. Climate Change, Adaptation & Mitigation (MS/M.Phil. Env. Sci.)
3. Environmental Issues in Water Resources (BS Hydrology)
4. Integrated Water Resource Management (IWRM) (BS Hydrology)
5. Environmental Issues (BS Env. Sci.)
6. Water Pollution & Control (BS Env. Sci.)
7. Research Methods in Environmental Sciences (BS Env. Sci.)
8. Environmental Engineering (BS Env. Sci.)
9. Air & Noise Pollution (BS Env. Sci.)
10. Introduction to Environmental Sciences (BS Env. Sci.)
11. Environmental Impact Assessment (EIA) (BS Env. Sci.)
12. Environmental and Occupational Toxicology (PGD OSH)

13. Environmental Economics and Sustainable Development (BS Env. Sci.)
14. Hydrochemistry and Pollution Control (BS Hydrology)
15. Analytical Chemistry (BS BS Env. Sci.)

#### **JOB HISTORY:**

- Serving as an **Assistant Professor (BS-19)** on adhoc basis at College of Earth & Environmental Sciences, University of the Punjab, Lahore from 26-05-2023 to till date.
- Served as an **Admin Officer (BS-17)** on regular basis in Registration Branch, Registrar Office, University of the Punjab, Lahore, from 28-05-2021 to 26-05-2023.
- Served as **Assistant Professor (BS-19)** in the **Department of Environmental Science**, Faculty of Agriculture & Environment, The Islamia University of Bahawalpur since from 06-04-2021 to 28-05-2021.
- Served as **Associate Lecturer (BS-17)** in the **Department of Environmental Science**, Faculty of Agriculture & Environment, The Islamia University of Bahawalpur since from 28-10-2020 to 05-04-2021.
- Worked as **Assistant Professor (visiting)** at College of Earth and Environmental Sciences, University of the Punjab, Lahore.
- Worked as **Environmentalist** in Pak Green Enviro-Engineering (Pvt.) Ltd. Lahore from May 28, 2021 to May 27, 2023.
- Worked as **Environmentalist** in Elite Environmental Solutions, (Environmental Engineers & Consultants) Lahore from September 01, 2016 to November 24, 2018.
- Worked as **Environmentalist** in Klimatech Environment Consultants, Lahore from December 04, 2013 to October 18, 2014.

#### **RESEARCH PUBLICATIONS: 50**

**(Total Impact Factor: 130.95)**

1. **Khan WU**, Tanveer F, Akhtar E, Wajid H, Munir B, Qadir A, Jamil N, Yasin NA. (2025). Unravelling the role of zinc for phytostabilization of chromium in petroleum hydrocarbon polluted soil by *Tagetes erecta*. *International Journal of Phytoremediation*. (<https://doi.org/10.1080/15226514.2025.2603495>). (IF: 3.1, Q2)
2. Akram W, Areeba Rehman A, Yasin NA, Khan I, Khurshid S, Anjum T, Aftab ZH, Rizwana H, Munir B, **Khan WU**, Gunawardhana E and Li G. (2025). Exploring the potential of Rutin dihydrate to induce tolerance against Pentachloronitrobenzene induced phytotoxicity in Chinese Flowering Cabbage. *New Zealand Journal of Crop and Horticultural Science*. DOI: 10.1002/nzc2.70096. (IF: 1.5, Q2)
3. Shabbir I, Amanat S, **Khan W. U\***, Jamil N, Munir A, Munir B and Rehman A. (2025). Foliar Application of Zinc Oxide Nanoparticles Ameliorated the Adverse Effects of Cobalt Toxicity in *Raphanus sativus* By Regulating Growth, Photosynthesis and Antioxidant Defense Machinery. *Pakistan Journal of Science* (Vol. 77 No. 3 September, 2025), 325. (HEC Y category)

4. Batool I, Zafar H, Munir A, Majeed A, Ahmed I, Irfan M, Haroon MA, **Khan WU** and Zafar T. (2025). Geospatial Mapping of Drinking Water Contamination and Health Implications in a Semi-Arid Tehsil of Pakistan. *Journal of Asian Development Studies*. 14 (3) (September 2025). <https://doi.org/10.62345/jads.2025.14.3.103>. (HEC Y category).
5. Fatima S, **Khan WU**, Sardar R, Munir B, Rehman A, Akram W, Munir I, Yasin NA. (2025). Synergistic Application of *Bacillus subtilis* IAGS174 and Thiamine to Mitigate Salinity and Lead Stress in *Helianthus annuus*. *Peer I*, 9:13: e19527. Doi: 10.7717/peerj.19527. (IF: 2.4, Q2)
6. Khan, I., Rehman, A., Akram, W., Anjum, T., Yasin, N.A., Aftab, Z.E.H., Munir, B., **Khan, W.U.** and Li, G., 2025. Unlocking Salinity Stress Resilience in Turnip (*Brassica rapa* subsp. *rapa*) Plants Using *Bacillus subtilis* Z-12 and *Bacillus aryabhatai* Z-48. *Microorganisms*, 13(2), p.359. (IF: 4.2, Q2).
7. Haroon, M., **Khan, W.U\***, Munir, B., Ahmad, S.R., Rehman, A., Akram, W., Munir, A., Sardar, R. and Yasin, N.A., 2025. Seed priming with alpha-tocopherol alleviates microplastic stress in *Brassica rapa* through modulations in morphological, physiological and biochemical attributes. *Chemosphere*, 371, p.144060.
8. **Khan W.U.**, Yasin NA, Ahamad SR, Nazir A, Naeem K, Nadeem QUA, Nawaz S, Ijaz M, Tahir A. (2023). *Burkholderia cepacia* CS8 improves phytoremediation potential of *Calendula officinalis* for Tannery Solid Waste polluted soil. *International Journal of Phytoremediation*. 25(12); 1656-1668. doi: 10.1080/15226514.2023.2183717. (IF: 4.001, Q2).
9. Naveed N.H., Naz S., Malik A.M. and **Khan W.U\***. (2023). In vitro induced mutagenesis for Early Blight (*Alternaria solani*) resistance in Potato (*Solanum tuberosum* L.). *Polish Journal of Environmental Studies*. 2023;32(6):5283-5299. DOI: <https://doi.org/10.15244/pjoes/157491> (IF: 1.87, Q4).
10. Anwar S., Shah AA., Yasin N.A., Ramzan M., **Khan W.U.**, Kousar S., Abbasi GH., Ansar MJ., Babur E., Uslu OS., Danish S., Hussain MI., and Datta R. (2022). Interactive potential of *Bacillus megaterium* A12 and Biochar in Chromium stress mitigation in *Spinacia oleraceae*: Methylglyoxal detoxification and activation of antioxidant enzymes. *Pakistan Journal of Botany*. 55(5): 1931-1940, 2023. DOI: [http://dx.doi.org/10.30848/PJB2023-5\(43\)](http://dx.doi.org/10.30848/PJB2023-5(43)). (IF: 1.10, Q4).
11. Akram W., Yasin N.A., Shah A.A., **Khan W.U.**, Li G., Ahmad A., Shakil A., Hussan M., Rizwan M., and Ali S. (2022). Exogenous application of liquiritin alleviated salt stress and improved growth of Chinese kale plants. *Scientia Horticulturae*, 294(2022), 110762. <https://doi.org/10.1016/j.scienta.2021.110762>. (IF: 4.3, Q1).
12. Shafqat A., Tahir A., **Khan WU\***, Mahmood A, Abbasi GH. (2021). Production and characterization of rice starch and cornstarch based biodegradable bioplastic using varying

- plasticizers and reinforced with natural fillers. *Cellulose Chemistry and Technology*. 55(7-8):867-881. DOI:10.35812/CelluloseChemTechnol.2021.55.73. (IF: 1.46, Q3).
13. Shahzadi I., Khan ZH., Akram W., **Khan WU**., Ahmad A., Yasin NA., Yujie L. (2022). Heavy metal and organic pollutants removal from water using bilayered polydopamine composite of sandwiched graphene Nanosheets: One solution for two obstacles. *Separation and Purification Technology*. 280(2022), 1-14. 119711. <https://doi.org/10.1016/j.seppur.2021.119711>. (IF: 9.10, Q1).
  14. Akram W., **Khan WU**, Shah AA and Yasin NA. (2021). Liquiritoside alleviated Pb induced stress in *Brassica rapa* subsp. *Parachinensis*: Modulations in glucosinolate content and some physiochemical attributes. *Frontiers in Plant Science*, 12:722498. doi: 10.3389/fpls.2021.722498. (IF: 6.62, Q1).
  15. Ahmad A, Yasin NA, **Khan WU**, Akram W, Wang R, Shah AA, Akbar M, Ali A, and Wu T. (2021). Silicon assisted ameliorative effects of iron nanoparticles against cadmium stress: Attaining new equilibrium among physiochemical parameters, antioxidative machinery, and osmoregulators of *Phaseolus lunatus*. *Plant Physiology and Biochemistry*. 166 (2021), 874-886. <https://doi.org/10.1016/j.plaphy.2021.06.016>. (IF: 5.43, Q1).
  16. Fiaz S., Yasin NA., **Khan WU**., Shah AA., Akram W., Ali A., Naveed NH., Riaz L. (2021). Role of Magnesium Oxide Nanoparticles in the mitigation of Lead induced Stress in *Daucus Carota*. Modulation in Polyamines and Antioxidant Enzymes. *International Journal of Phytoremediation*. 20; 1-9. doi: 10.1080/15226514.2021.1949263. (IF:3.61, Q2).
  17. Jiang L, Akram, W., Luo B, Hu S, Faruque MO, Ahmad S, Yasin NA, **Khan WU**, Ahmad A, Shikov AN, Chen J., and Hu X. (2021). Metabolomic and pharmacologic insights of aerial and underground parts of *Glycyrrhiza uralensis* fisch. ex dc. for maximum utilization of medicinal resources. *Frontiers in Pharmacology*. 12:658670. <https://doi.org/10.3389/fphar.2021.658670>. (IF: 5.98, Q1).
  18. Ahmad A, Shahzadi I, Mubeen S., Yasin NA., Akram W., **Khan WU**., Wu T. (2021). Karrikinolide Alleviates BDE-28, Heat and Cd Stressors in *Brassica alboglabra* by Correlating and Modulating Biochemical Attributes, Antioxidative Machinery and Osmoregulators. *Ecotoxicology and Environmental Safety*. 213(2021): 112047. (IF: 7.12).
  19. Shaha AA, Yasin NA, Akram K, Ahmad A, **Khan WU**, Akram W, Akbar M. (2021). Ameliorative role of *Bacillus subtilis* FBL-10 and silicon against lead induced stress in *Solanum melongena*. *Plant Physiology and Biochemistry*. 158: 486-496. <https://doi.org/10.1016/j.plaphy.2020.11.037>. (IF: 5.43).
  20. Shah AA, Aslam S, Akbar M, Ahmad A, **Khan WU**, Yasin NA, Ali B, Rizwan M, and Ali S. (2021). Combined effect of *Bacillus fortis* IAGS 223 and zinc oxide nanoparticles to alleviate cadmium phytotoxicity in *Cucumis melo*. *Plant Physiology and Biochemistry*. 158: 1-12. <https://doi.org/10.1016/j.plaphy.2020.11.011> (IF: 5.43).
  21. Ahmad A, **Khan WU**, Shah AA, Yasin NA. Ali A, Rizwan M, Ali S. (2021). Dopamine Alleviates Hydrocarbon Stress in *Brassica Oleracea* through Modulation of Physio-Biochemical Attributes and Antioxidant Defense Systems. *Chemosphere*. 270: 128633. <https://doi.org/10.1016/j.chemosphere.2020.128633>. (IF: 8.94).

22. Ahmad A, **Khan WU**, Shah AA, Yasin NA, Naz S, Ali A, Tahir A. (2021). Synergistic effects of nitric oxide and silicon on promoting plant growth, oxidative stress tolerance and reduction of arsenic uptake in *Brassica juncea*. *Chemosphere*. 262(2021): 128384. (IF: 8.94). <https://doi.org/10.1016/j.chemosphere.2020.128384>.
23. Li G, Shah AA, **Khan WU.**, Yasin NA, Abbas M, Safdar MN, Ali A. (2021). Hydrogen sulfide mitigates cadmium induced toxicity in *Brassica rapa* by modulating physiochemical attributes, osmolyte metabolism and antioxidative machinery. *Chemosphere*, 263 (20121) 127999. <https://doi.org/10.1016/j.chemosphere.2020.127999>. (IF: 8.94).
24. Shah AA, **Khan WU**, Akram W, Yasin NA, Safdar AN, Ali A, Abbas M, Aqeel A, Ahmad A. (2020). Butanolide alleviated cadmium stress by improving plant growth, photosynthetic parameters and antioxidant defense system of *brassica oleracea*. *Chemosphere*, (261), 127728. <https://doi.org/10.1016/j.chemosphere.2020.127728>. (IF: 7.086).
25. Ijaz M, Ahmad SR, Akram M, Thygerson SM, Nadeem FA and **Khan WU**. (2020). Cross-sectional survey of Musculoskeletal disorders in workers practicing traditional methods of underground coal mining. *International Journal of Environmental Research and Public Health*. 17:2566. doi: 10.3390/ijerph17072566. (IF: 3.39).
26. Ijaz M, Ahmad SR, Akram M, **Khan WU\***, Yasin NA, Nadeem FA. (2020). Quantitative and qualitative assessment of musculoskeletal disorders and socioeconomic issues of workers of brick industry in Pakistan. *International Journal of Industrial Ergonomics*. 76(2020): 102933. (IF: 2.656, Q2).
27. Ijaz M, Akram M, Ahmad SR, **Khan WU\***, Thygerson SM, Nadeem FA. (2020). Dust generation and respiratory impacts of underground coal producing mines of Punjab, Pakistan. *Polish Journal of Environmental Studies*, 29(5):1-10. (IF: 1.69).
28. Ijaz M, Tabinda AB, Ahmad SR, **Khan WU\***, Yasin NA. (2020). Biogas synthesis from solid waste of leather industry, in District Sialkot Pakistan. *Polish Journal of Environmental Studies*, 29(5):1-8. (IF: 1.69).
29. Akram W, Ahmad A, Yasin NA, **Khan WU**, Guo J, Luo W, Xie D, Li G. (2019). First Report of Stem Rot of Taro Caused by *Pythium ultimum* in China. *Plant Disease*. 104(3): 995. (IF: 3.8).
30. Akram W, Saeed T, Ahmad A, Yasin NA, Akbar M, **Khan WU**, Ahmed S, Guo J, Luo W, Wu T, Li G. (2019). Liquiritin elicitation can increase the content of medicinally important glucosinolates and phenolic compounds in Chinese kale plants. *Journal of the Science of Food and Agriculture*. 100(4):1616-1624. DOI: 10.1002/jsfa.10170. (IF: 2.61).
31. Akram W, Hina A, Guihua, L, Ahmad SR, Anjum T, Yasin NA, **Khan WU**, Ahmad A, Juxian G, Tingquan W and Luo W. (2019). *Bacillus megaterium* strain A12 ameliorates salinity stress in tomato plants through multiple mechanisms. *Journal of Plant Interactions*. 14(1): 506-518. <https://doi.org/10.1080/17429145.2019.1662497> (IF=2.9, Q2).
32. Yasin NA, Akram W, **Khan WU\***, Ahmad SR, Ahmad A, Ali A (2018). Halo-tolerant plant-growth promoting rhizobacteria modulate gene expression and osmolyte production to improve salinity tolerance and growth in *Capsicum annum* L. *Environmental Science and Pollution Research*. 25(23):23236-23250. <https://doi.org/10.1007/s11356-018-2381-8>. (IF: 3.025).

33. Yasin NA, Zaheer MM, **Khan WU\***, Ahmad SR, Ahmad A, Ali A, and Akram W. (2018). The beneficial role of potassium in Cd-induced stress alleviation and growth improvement in *Gladiolus grandiflora* L. *International Journal of Phytoremediation*, 20(3): 274-283. <http://dx.doi.org/10.1080/15226514.2017.1374337>. (IF: 2.237).
34. Zaheer MM, YasinNA, Ahmad SR, **Khan WU**, Ahmad A, Ali A and Rehman SU. (2018). Amelioration of Cadmium Stress in Gladiolus (*Gladiolus grandiflora* L.) by Application of Potassium and Silicon. *Journal of Plant Nutrition*. 41(4): 461-476. doi: org/10.1080/01904167.2017.1385808. (IF:0.85, Q2)
35. **Khan WU**, Yasin NA, Ahmad SR, Ali A, Ahmad A, Akram W and Faisal M. (2018). Role of *Burkholderia cepacia* CS8 on Cd-stress alleviation and phytoremediation by *Catharanthus roseus*. *International Journal of Phytoremediation*. 20(6): 581-592. <https://doi.org/10.1080/15226514.2017.1405378>. (IF: 2.237).
36. Yasin NA, **Khan WU\***, Ahmad SR, Ali A, Ahmed S and Ahmad A. (2018). Effect of *Bacillus fortis* 162 on growth, oxidative stress tolerance and phytoremediation potential of *Catharanthus roseus* under chromium stress. *International Journal of Agriculture and Biology*.20: 1513-1522. (IF: 0.902).
37. Yasin NA, **Khan WU\***, Ahmad SR, Ali A, Ahmad A, Akram W. (2017). Imperative roles of halotolerant plant growth promoting rhizobacteria and kinetin in improving salt tolerance and growth of black gram (*Phaseolus mungo*). *Environmental Science and Pollution Research*. 25(5):4491-4505. doi: 10.1007/s11356-017-0761-0. (IF: 2.91).
38. Yasin NA, **Khan WU\***, Ahmad SR, Ahmad A, Akram W, Ijaz M. (2019). Role of *Acinetobacter* sp. CS9 for improvement of growth and phytoremediation potential of *Catharanthus longifolius* under cadmium stress. *Polish Journal of Environmental Studies*. 28(1): 435-443. (IF: 1.48).
39. **Khan WU**, Ahmad SR, Yasin NA, Ali A, Ahmad A and Akram W. (2017). Application of *Bacillus megaterium* MCR-8 improved phytoextraction and Stress Alleviation of nickel in *Vinca rosea*. *International Journal of Phytoremediation*. 19(9): 813-824. Doi: 10.1080/15226514.2017.1290580. (IF: 1.886, Q2).
40. Yasin NA, **Khan WU\***, Ahmad SR, Ali A, Ahmad A and Akram W. (2019). Effect of *Enterobacter* sp. CS2 and EDTA on the Phytoremediation of Ni Contaminated Soil by *Impatiens balsamina*. *Polish Journal of Environmental Studies*. 28(1): 425-433. (IF: 1.38, Q4).
41. **Khan WU**, Yasin NA, Ahmad SR, Ali A, Ahmed S, Ahmad A. (2017). Role of Ni-tolerant *Bacillus spp.* and *Althea rosea* L. in the phytoremediation of Ni-contaminated soils. *International Journal of Phytoremediation*. 19(5): 470-477. Doi:10.1080/15226514.2016.1244167. (IF: 1.886).
42. **Khan WU**, Ahmad SR, Yasin NA, , Ali A, Ahmad A (2017). Effect of *Pseudomonas fluorescens* RB4 and *Bacillus subtilis* 189 on the phytoremediation potential of *Catharanthus roseus* (L.) in Cu and Pb contaminated soils. *International Journal of Phytoremediation*. 19(6): 514-521. Doi: 10.1080/15226514.2016.1254154. (IF: 1.886).
43. Ahmad A, Yasin NA, Ibrahim A, Shahzadi I, Gohar M, Bashird Z, Khan J, **Khan WU**, and Akrama W. (2017). Modelling of cotton leaf curl viral infection in Pakistan and its correlation

- with meteorological factors up to 2015. *Climate and Development*. 2017 2017: 1-7. <http://dx.doi.org/10.1080/17565529.2017.1318738>. (IF: 2.05).
44. Shahzadi I, Ahmad A, Yasin NA, Fareed G, Ashraf Y, Akram W, **Khan WU** and Tayyab M. (2017). First report of *Alternaria brassicicola* causing leaf spots on garlic, an important food and medicinal plant. *Journal of Medicinal Botany* 1: 15-19 doi: 10.25081/jmb.2017.v1.48.
  45. Yasin NA, **Khan WU**, Ashraf Y and Ali A. (2017). Comparative physiological and morphological characterization of salt tolerance in *Raphanus sativus* L. *Journal of Plant Biochemistry and Physiology*, 5:177. doi: 10.4172/2329-9029.1000177.
  46. Yousaf A, Ashraf Y, Yasin NA, Ibrahim A, Ahmad A, **Khan WU**, Bashir Z, Akram W, Noreen Z. (2016). Analysis of Microbial Biochemical Inducting Nutritional Contents in Barley. *Journal of Microbial and Biochemical Technology*, 8: 395-403. doi: 10.4172/1948-5948.1000315.
  47. Yasin NA, Ahmed S, **Khan WU** and Ashraf Y. (2016). Survey and pathogenicity of black spot disease of rose in Pakistan. *Journal of Horticulture* 3, 189-197. doi: 10.4172/2376-0354.1000189.
  48. Yasin NA, **Khan WU**, Akram W, Ahmad A, Ashraf Y, and Ali A. (2017). Application of rhizobacteria for induction of systemic resistance in *Brassica campestris* L. against *Alternaria* leaf spot disease caused by *Alternaria brassicae*. *Research & Reviews: Microbiology and Biotechnology*, 6(1): 51-58.
  49. Ahmad A, Akram W, Yasin NA, **Khan WU**, Noreen S, Ashraf Y, Ahmed S. (2017). An insight into the associated microflora of *Parthenium hysterophorus* L. *Journal of Innovative Bio-research*, 1(1): 1-7.

#### **Book Chapter published**

1. Shahzadi, I., Ahmad, A., Noreen, Z., Akram, W., Yasin, N. A., & Khan, W. U. (2022). Brassinosteroid and Ethylene-Mediated Cross Talk in Plant Growth and Development. In *Brassinosteroids Signalling* (pp. 117-136). Springer, Singapore. [https://doi.org/10.1007/978-981-16-5743-6\\_7](https://doi.org/10.1007/978-981-16-5743-6_7).

#### **Research Project Undertaken**

1. Undertaken research project on the topic; **Potential of Plant Growth Regulator for Mitigation of Microplastics Stress in *Abelmoschus esculentus* worth (0.2 Million) granted from ORIC Punjab University, Lahore, Year 2024-25.**

#### **Research work presented in National/International Conferences**

1. Presented research work on topic “***Enterobacter sp. CS2* improves phytoremediation of nickel contaminated soil by *Catharanthus roseus***” in 4<sup>th</sup> International Conference on Emerging Trends in Earth and Environmental Sciences held at College of Earth and Environmental Sciences, University of the Punjab, Lahore December 4-6, 2023
2. Presented research work on topic “**Arsenic stress mitigation in *Catharanthus ovalis* by *Enterobacter sp. CS2***” in 3<sup>rd</sup> International Conference on Emerging Trends in Earth and Environmental Sciences held at College of Earth and Environmental Sciences, University of the Punjab, Lahore October 2021.

3. Presented research work on topic “**Ameliorative role of *Acinetobacter* Sp. CS9 against lead stress in *Brassica rapa L*”** in an International Conference on Emerging Trends in Earth and Environmental Sciences held at College of Earth and Environmental Sciences, University of the Punjab, Lahore, March 2020.

#### **Research Work Supervision at PhD level. at CEES PU**

1. **Ms. Bareera Munir, Ph.D** Environmental Sciences, 2023-28, Topic; Assessing the role of rhizobacteria and carbon nano particles on phytoremediation of Polycyclic aromatic Hydrocarbons and Toxic Metal Contaminates soil by Sunflower
2. **Malik Muhammad Mansoor, Ph.D** Environmental Sciences, 2024-29, Topic; Assessing the role of constructed wetlands for phytoremediation of industrial wastewater

#### **Research Work Supervision at MS/M. Phil. at CEES PU**

1. **Malik Mansoor; M.Phil.**, Environmental Sciences, 2022-24, Research Topic: **Appraisal of deforestation and forest degradation trends in tribal areas of Pakistan using remote sensing techniques**
2. **Mehak Zara; M.S.** Environmental Sciences, 2022-24, Research Topic: **Assessment of changing Hydrological trends in Mangla dam watershed using Soil and Water Assessment Tool (SWAT).**
3. **Muhammad Haris; M.Phil.**, Environmental Sciences, 2022-24, Research Topic: **A GIS based Impact Assessment of Climatic variables on evapotranspiration in Punjab, Pakistan**
4. **Sidra Fatima; M.S.**, Environmental Sciences, 2022-24, Research Topic: **Synergistic application of *Bacillus subtilis* IAGS174 and Thiamine to mitigate Salinity and Lead stress in *Helianthus annuus***
5. **Habib Ur Rehman; M.Phil.**, Occupational Health & Safety, 2022-24, Research Topic: **Assessment of Occupational Health and Safety issues prevailing across work at height construction sites in Lahore**
6. **Zara Zulqarnain; M. Phil.**, Occupational Health & Safety, 2022-24, Research Topic: **An investigation for Occupational Health Implications of Smoke and cooking fumes inhalation among barbecue workers.**
7. **Saleha Basit; M.S.**, Environmental Sciences, 2023-25, Research Topic: **Beneficial role of zinc oxide nanoparticles in alleviation of lead stress in cucumber**
8. **Areeba Tariq; M.S.**, Environmental Sciences, 2023-25, Research Topic: **Potential of zinc oxide nanoparticles for mitigation of chromium stress in pea.**
9. **Mahruk Haroon; M.S.**, Environmental Sciences, 2023-25, **Role of alpha tocopherol for alleviation of microplastic stress in turnip**
10. **Kainat Tahir. M.Phil.**, Occupational Health & Safety, 2023-25, **Assessment of Occupational Health & Safety issues among workers serving in iron cold mills of Lahore**
11. **Mahmoona** **Assessment of Occupational Health & Safety issues among nursing staff of Lahore Hospitals**
12. **Mudassar Shahzad, M.Phil.**, Environmental Sciences, **2023-25. Investigating The Synergistic Effects of Biochar and Glutathione on Morpho-Physiological and Biochemical Attributes of Maize under Water Deficit Conditions**

13. **Tayaba Hassan**, M.Phil, Environmental Sciences, 2024-26, Research Topic: **Role of rhizobacteria on phytoremediation of chlorpyrifos contaminated soil using *Tagetes erecta***
14. **Sidra Abdul Qayum**, MS Environmental Sciences, 2024-26, Research Topic: **Unravelling the carbon credit potential of solar system installed in Punjab University Lahore**
15. **Ezza Akhtar**, MS Environmental Sciences, 2024-26, Research Topic: **Assessing the efficacy of Rhizobacteria on phytoremediation of Pendimethalin polluted soil using *Tagetes erecta***

#### **Research Work Co-Supervision at MS/M. Phil. at CEES PU**

16. **Ayesha Tahir**; M. Phil., Environmental Sciences, 2022-24, Research Topic: **Assessment of Drinking Water Quality and associated health risks in Selected Districts of Punjab**
17. **Anam Slahu Din**; M.S., Environmental Sciences, 2022-24, Research Topic: **Assessment of Soil Quality in Peri-Urban and Urban Areas Across Selected Cities of Punjab**
18. **Mahnoor**; M.Phil., Environmental Sciences, 2022-24, Research Topic: **Assessment of soil and water quality along with associated health risks in Dera Ghazi Khan**
19. **Javaria Saeed**, M. Phil. Environmental Sciences, 2023-25, Research Topic: **A Machine Learning Based Prediction Model and Uncertainty Analysis for Evaluation of Water Quality in Punjab.**
20. **Mouzma Shafiq**. MS. Environmental Sciences, 2023-25, Research Topic: **Enhancing the Resilience of Radish Plant to Microplastic and Cadmium by Using Zinc Oxide Nanoparticles**
21. **Fatima Sana Rai**, Environmental Sciences, 2024-26, Research Topic: **Assessing the synergistic role of melatonin and potassium for phytostabilization of mercury and sodium polluted soil by *Cucurbita pepo*.**

#### **Research Work Supervision at BS level at CEES PU:**

22. **Afifa Naeem, Minahil Minhas, Zumara Tariq**; BS Env. Sci. (Self-supporting 2020-24). Topic: **Habitat Assessment of Turtles in Rawal Lake, Margala Hills National Park, Islamabad, Pakistan**
23. **Ezzah Akhtar, Hafsa Wajid, Fizza Tanvir**; BS Env. Sci. (Self-supporting 2020-24). Topic: **Application of zinc for mitigation of Chromium and Hydrocarbon stress in *Tagetes erecta***
24. **Saadullah Faraz, Adeeb Raza**; BS Env. Sci. (Morning 2020-24). Topic: **Prevalance of Musculoskeletal Disorders and their associated risks among bus drivers and staff**
25. **Turab Haider, Raheemullah, Hammad Raza**; BS Env. Sci. (Morning 2020-24). Topic: **Quantification and Characterization of microplastics in Tap water of Lahore**
26. **Muhammad Mudassar Nisar, Mukammad Ali and Muhammad Zain**; BS Env. Sci. (Self-supporting 2020-24). **Assessment of water quality from rural and urban areas of Tehsil Jaranwala**
27. **Nabia Sarfraz, and Laiba Sarfraz**; BS Env. Sci. (Self-supporting 2021-25). **Assessing the potential of zinc oxide nanoparticles in mitigation of lead stress in radish**

28. **Iqra Shabbir and Saba**; BS Env. Sci. (Morning 2021-25). Topic: **Assessing the potential of zinc oxide nanoparticles in mitigation of cobalt stress in radish**
29. **Tahreem Imran, Khadija Bilal Faisal and Alishba Nayab Ahmad**; BS Env. Sci. (Morning 2021-25). Topic: **Evaluation of the potential of zinc oxide nanoparticles in mitigation of nickel stress in Carrot.**
30. **Mahnour Nasiir, Maham Shahid** BS Env. Sci. (S. Supporting 2022-26). Topic; **Assessment of serotonin mitigation of Fluoride stress in *Tagetes erecta***
31. **Saba Rafiq, Aiza Ghafar, Syeda Hakima**, BS Env. Sci. (Morning 2022-26). **Determining the role of PGPR on phytoremediation of triclosan polluted soil by *Tegetes erecta***
32. **Aysha Majeed, Rozina Kausar**, BS Env. Sci. (Morning 2022-26). **Application of biochar and melatonin for alleviation of pharmaceutical waste toxicity in *Brassica oleracea*.**
33. **Zahra Nisar, Nimra Wahid**. BS Env. Sci. (S. Supporting 2022-26). **Estimating the potential of plant hormones on phytoremediation of Arsenic polluted soil by *Althaea rosea*.**
34. **Muhammad Adan, Ghazanfar**. BS Env. Sci. (S. Supporting 2022-26). **Role of Rhizobacteria for phytoremediation of Diesel contaminated soil by *Althaea rosea*.**
35. **Khola Rehan Fatima Irfan**. (S. Supporting 2022-26). **Unlocking the potential of chitosan for phytostabilization of Aluminum and Copper polluted soil by *Beta vulgaris***

**Research Work Co-Supervision at BS level at CEES PU:**

36. **Moez Farooq and Zahid Rasool**; BS Env. Sci. (Morning 2020-24). Topic: **Assessment of heavy metals concentration in tree leaves at various locations of Lahore**
37. **Muhammad Mobeen Asif and Haider Ali**; BS Env. Sci. (Self-supporting 2020-24). Topic: **Appraisal of drinking water quality from different areas of Lahore.**
38. **Zeeshan, Afaq Ahmad, M. Bilal**. BS Env. Sci. (Morning 2021-25). Topic; **Assessment of Occupational health & safety issues in Information technology staff of Lahore**
39. **Saba Latif, and Maham Tabassum**; BS Env. Sci. (Morning 2021-25). **Detection and characterization of microplastics in mulched vegetable cropland soil**

**WORKING AS A REVIEWER WITH FOLLOWING JOURNALS**

1. Journal Of Hazardous Material (**Elsevier**)
2. Environmental Pollution (**Elsevier**)
3. Scientific reports (**Nature**)
4. Plant Stress (**Elsevier**)
5. PLOS One
6. Pedosphere
7. Frontiers In Sustainable Food Systems (**Frontiers Media**)
8. Environmental Science and Pollution Research (**Springer**)
9. Frontiers in Plant Sciences (**Frontiers Media**)
10. Ecotoxicology and Environmental Safety (**Elsevier**)

11. International Journal of Phytoremediation (**Taylor and Francis**)
12. Biologia (**Springer**)
13. Cleaner Water (**Elsevier**)
14. Biomass Conversion and Biorefinery (**Springer**)
15. Pakistan Journal of Scientific and Industrial Research (**PCSIR Scientific Information Centre**)
16. Journal of Plant Growth Regulation (**Springer**)
17. Plant Ecology (**Springer**)
18. Journal of Basic Microbiology (**Wiley**)
19. International Journal of Agronomy (**Wiley**)
20. Biomass Conversion and Biorefinery (**Springer**)
21. Biocatalysis and agricultural biotechnology (**Elsevier**)
22. Journal of Soil Science and Plant Nutrition (**Springer**)
23. International Journal of Pest Management (**Taylor and Francis**)
24. Journal of Molecular Liquids (**Elsevier**)
25. Scientia Horticulturae (**Elsevier**)
26. Journal of Plant Nutrition (**Taylor and Francis**)
27. Heliyon (**Cell Press**)
28. Folia microbiologica (**Springer**)
29. International Journal of Pest Management (**Taylor and Francis**)
30. Environmental Geochemistry and Health (**Springer**)
31. Acta Physiologiae Plantarum (**Springer**)
32. Tree Physiology (**Oxford Academic**)
33. Journal of Occupational Health (**Wiley**)
34. Plant and Soil (**Springer**)
35. Journal of Food Quality (**Hindawi**)
36. Applied Chemical Engineering (**ACE**)
37. International Archives of Occupational and Environmental Health (**Springer**)
38. Polish Journal of Environmental Studies (**HARD" Publishing Company**)
39. Journal of Biology and Nature (**L.K. Press**)
40. International Journal of Occupational Safety and Ergonomics (**Taylor and Francis**)
41. Chemical and Biological Technologies in Agriculture (**Springer**)
42. Journal of Natural Fibers (**Taylor and Francis**)
43. International Journal of Environment and Climate Change (**Emerald Publishing**)

44. International Journal of Agronomy (**Hindawi**)
45. Plant Cell Biotechnology and Molecular Biology (**I. K. Press**)
46. Journal of Veterinary and Animal Research (**Scholarena**)
47. Journal of Biostatistics and Biometric Applications
48. The 5th International conference on Agricultural and Biological Sciences (ABS 2019). China
49. African Journal of Plant Sciences
50. African Journal of Microbial Research
51. African Journal of Biotechnology
52. Premium Publishers
53. Journal of Thoracic Diseases

#### **ADDITIONAL RESPONSIBILITIES IN IUB & PU and Membership of Organizations:**

- Served as **BS Coordinator** for **Environmental Science** program at College of Earth & Environmental Sciences, University of the Punjab, Lahore from May, 2023- June, 2024.
- Served as **MS/MPhil Co-Coordinator for Environmental Science** program at College of Earth & Environmental Sciences, University of the Punjab, Lahore session 2024-25.
- Serving as member of **Quality Enhancement Team** of **Environmental Science** program at College of Earth & Environmental Sciences, University of the Punjab, Lahore
- **In charge Cleanliness and Maintenance Committee**, College of Earth & Environmental Sciences, University of the Punjab, Lahore.
- Served as Member, Admission Committee, College of Earth & Environmental Sciences, University of the Punjab, Lahore
- Served as Member, Examination Committee, College of Earth & Environmental Sciences, University of the Punjab, Lahore
- Served as "**Head of Research on Environment**" in Green Campus Project for The Islamia University of Bahawalpur (IUB), an Integrated Environmental Management Approach Along with TORs. (2020-21).
- Served as **Co-advisor, in Environmental Protection Society**, The Islamia University of Bahawalpur, 2020-2021.
- Served as Member, Admission Committee, Department of Environmental Science, IUB.
- Served as Member, Discipline Committee, Department of Environmental Science, IUB.
- Served as Member, Event Management Committee, Department of Env. Science, IUB.
- Serving as member of steering committee of **Punjab Climate Action Network** a forum established for addressing challenges related to climate change, resilience, and sustainable development in Punjab
- Serving as a member of **Strengthening Participatory Organization (SPO)** a leading Pakistani rights-based Civil Society Organization (CSO).
- Professional membership in International Society of Environmental Relationship and Sustainability (ISERS)
- Member of Punjab Geological Society

#### **AWARDS / HONORS/ CONFERENCES:**

- **First position holder in M.Sc. Environmental Sciences**, College of Earth and Environmental Sciences, University of the Punjab Lahore.
- Served as Co-Organizer for organizing **International Symposium on Integrating Science, Policy and Technology for Smog Mitigation** on October 22, 2025 (**Awareness to Action**), at College of Earth and Environmental Sciences, University of the Punjab, Lahore
- Participated in session on **Stakeholder Consultation Session on Framework for unlocking the potential of Carbon Market Projects in Punjab** at Faletti,s Hoetl Lahore on 3<sup>rd</sup> October 2025, Organized by **Punjab Environmental Protection and Climate Change Department, Lahore**
- Served as Co-Organizer for organizing **Plastic Free July 2025, Webinar Series** from July 21 to July 23, at College of Earth and Environmental Sciences, University of the Punjab, Lahore.
- Participated in a **Pannel Talk** in a **Seminar on International Plastic Bag Free Day**, organized by **Plastic Cell Govt of Punjab and Punjab Environmental Protection Agency at, Flatty Hotel, Lahore on 3<sup>rd</sup> July 2025.**
- Participated in a **Pannel Talk** in a **Seminar Commemorating World Environmental Day, 2025** themed “**Beat Plastic Pollution**” organized by **CM Green Credit Program and Punjab Environmental Protection Agency at Ramada, Gulberg, Lahore on 5<sup>th</sup> June 2025.**
- Served as Co-Organizer for holding a Seminar to **Celebrate World Environment Day, 2025 (Uniting to Beat Plastic Pollution)**, at College of Earth and Environmental Sciences, University of the Punjab, Lahore on 4 June 2025.
- Served as Organizer for holding a seminar for the College of Earth and Environmental Sciences **in collaboration with the Environmental Protection Department Govt. of Punjab on Green Credits, CM Punjab Green Credit Program** on March 17, 2025. at College of Earth and Environmental Sciences, University of the Punjab, Lahore
- Participated as **Invited Speaker** in **3rd Summer School on Maritime Affairs on topic of Climate Change and Oceans at Minhaj University, Lahore, on July 22-23, 2024**
- Participated as **Invited Speaker** in a **Seminar on PLASTIC FREE PLANET & WORLD ENVIRONMENT DAY at Minhaj University, Lahore, on July 4, 2024**
- Participated in Curriculum Development Meeting for **Mainstreaming Climate Change into Higher Education of Pakistan** organized by GIZ Germany and University of Kassel, Germany, at Nishat Hotel, Emporium, Lahore on June 27, 2024.
- Served as Co-Organizer for holding a Seminar to **Celebrate World Environment Day, 2024**, at College of Earth and Environmental Sciences, University of the Punjab, Lahore on 6 June 2024.
- Attended **3<sup>rd</sup> International Conference and Exhibition, 2024** organized by Environmental Protection Department, Govt. of the Punjab, Lahore on 5 June, 2024.
- Served as a Co-Organizer for "**National Seminar on Solutions to Plastic Pollution**" on June 05, 2023 at Al-Razi Hall, University of the Punjab, Lahore.
- Participated as Speaker/ Co-Organizer in “**4<sup>th</sup> International Conference on Emerging Trends in Earth and Environmental Sciences**” held at College of Earth and Environmental Sciences, University of the Punjab Lahore, December 4-6, 2023.

- Participated as Speaker in **“3rd International Conference on Emerging Trends in Earth and Environmental Sciences”** held at College of Earth and Environmental Sciences, University of the Punjab Lahore, October 2021
- Completed **Spoken English Course** (3month) from English Department, University of the Punjab, Lahore, from June 1, 2017 to August 30, 2017.
- Participated in training workshop on **"Effective writing skill and official correspondence"** organized by Halley College of Commerce, University of the Punjab, Lahore from June 21, 2021 to June 29, 2021.
- Participated in an **"International Scholarships Seminar"** in Main Auditorium BJ Campus, The Islamia University of Bahawalpur on February 23, 2021.
- Participated in an Occupational Safety and Health Workshop **"Fire Safety/ Traffic Safety/ SOPS of COVID-19/ CPR and Life Safety during emergency situations"** held at The Islamia University of Bahawalpur on February 10, 2021.
- Organized an **"International Seminar on Smog"** on November 11, 2020 at Main Auditorium, BJ Campus, Department of Environmental Science, The Islamia University of Bahawalpur.
- Participated as Speaker in **“2nd International Conference on Emerging Trends in Earth and Environmental Sciences”** held at College of Earth and Environmental Sciences, University of the Punjab Lahore from March 04 to 06, 2020.
- Participated/Organized **"5TH INVENTION TO INNOVATION SUMMIT 2016 THE INNOVATION EXPO TO BUY AND SELL TECHNOLOGY"** on March 02-03, 2016, at University of the Punjab Lahore.
- Attended **"WORKSHOP ON ENTREPRENEURSHIP, USE OF BUSINESS INTELLIGENCE FOR DEVELOPMENT"** on November 8, 2016 at Institute of Chemical Engineering and Technology, University of the Punjab Lahore.
- Participated in SEMINAR ON **“WORLD ENVIRONMENT DAY JUNE 05, 2012”** organized by Punjab Forest Department in Collaboration with University of the Punjab at University of the Punjab Lahore.
- Participated in Workshop on **“FUNDAMENTALS OF OCCUPATIONAL HEALTH AND SAFETY”** on 8<sup>th</sup> March, 2017 at College of Earth and Environmental Sciences, University of the Punjab, Lahore.
- Participated in Workshop on **“FUNDAMENTALS OF GEOGRAPHICAL INFORMATION SYSTEM AND REMOTE SENSING”** on 8<sup>th</sup> March, 2017, at College of Earth and Environmental Sciences, University of the Punjab, Lahore.
- Participated/organized in **“6th Invention to Innovation Summit 2017”** held at University of the Punjab during March 08 to 09, 2017.
- Participated in **“The First International Conference on Emerging Trends in Earth and Environmental Sciences”** held at College of Earth and Environmental Sciences, University of the Punjab Lahore during March 09 to 10, 2017.
- Participated in an International Seminar on **"PROSPECTS OF AGRICULTURAL RESEARCH (Current and Future)"** on August 23, 2017 at Institute of Agricultural Sciences, University of the Punjab Lahore.

- Participated in a national Seminar on "**KITCHEN GARDENING AND SEED DISTRIBUTION**" on September 21, 2017 at Institute of Agricultural Sciences, University of the Punjab Lahore.
- Participated in a Seminar on "**GLOBAL CLIMATE CHANGE**" on November 23, 2017 at Institute of Agricultural Sciences, University of the Punjab Lahore.
- Participated in "**3D DESIGNING GARDEN WORKSHOP**" on February 08, 2018 at Institute of Agricultural Sciences, University of the Punjab Lahore.
- Participated/Organized "**7<sup>TH</sup> INVENTION TO INNOVATION SUMMIT 2018 TO BUY AND SELL TECHNOLOGY**" on March 07-08, 2018, ORIC University of the Punjab Lahore.
- Participated/Organized "**8<sup>TH</sup> INVENTION TO INNOVATION SUMMIT 2019 BUY AND SELL TECHNOLOGY**" on April 02-03, 2019, ORIC University of the Punjab Lahore.
- **My 45 research manuscripts** have been published in peer reviewed journals. In most of these research articles I am either 1<sup>st</sup> author or corresponding author.
- My present **impact factor is over 126.**

#### **LANGUAGES:**

- **Urdu** Full working knowledge
- **English** Full working knowledge
- **Punjabi** Full working knowledge

#### **TECHNICAL KNOW HOW:**

- ✓ Environmental and Occupational Toxicology, Environmental Biology, Environmental Microbiology, Environmental Bio-technology, Environmental Chemistry, Environmental Hydrology and Environmental Geology.
- ✓ Bioremediation, Introduction to Earth Sciences, Biology-I, Fundamentals of Ecology and Introduction to Environmental Sciences.
- ✓ Environmental Impact Assessment and Initial Environmental Examination.
- ✓ Air Pollution Management Techniques and Advanced Analytical Techniques.
- ✓ Ergonomics, Occupational Health and Safety, ISO 9001, ISO14001.
- ✓ Environmental policy and Law.
- ✓ Water, Waste Water Sampling and Analysis, Monitoring of Stack Emissions
- ✓ Integrated Waste Management, Life Cycle Assessment, Water /Waste Water Treatment.
- ✓ Human Resource Management, Office documentation, SPSS, DSAASTAT, Data basis
- ✓ Nuclear Mineral Deposit and Nuclear Waste management.
- ✓ Freshwater Ecology, Water Resources, Sustainability and Modeling.
- ✓ Research Methods in Environmental Sciences.
- ✓ Energy Conservation, Global Warming and Climate Change.
- ✓ Eco-toxicology and Human Health.
- ✓ Dengue mosquito and mealy bug management measures.
- ✓ Sustainable crop production and development, improvement & maintenance of landscape projects and Generation of Bio-gas from Tannery Waste

- ✓ Reclamation of Soils with inappropriate pH value and low fertility.
- ✓ Periodic care of indoor plants and Green House Management.
- ✓ Bio-char formation and Conversion of green waste into Compost.
- ✓ Nursery Management, Organic Farming, Kitchen Gardening and Store Management.

#### **PROFESSIONAL ACHIEVEMENTS:**

- ◆ Isolated, identified and submitted rhizobacterial strain *Acinetobacter* sp. CS9 capable to improve plant growth and phytoremediation potential of *Catharanthus longifolius*.
- ◆ Isolated, identified and submitted rhizobacterial strain *Burkholderia cepacia* CS8 to alleviate Cd stress and enhance phytoremediation capability of *Catharanthus roseus*.
- ◆ Isolated, identified and submitted rhizobacterial strain *Enterobacter* sp. CS2 which improved Phytoremediation of Ni Contaminated Soil by *Impatiens balsamina*.
- ◆ Isolated, identified and submitted halo-tolerant rhizobacterial strains *Pseudomonas fluorescens* SA8 and *Acinetobacter baylyi* SA13 responsible for mitigating salinity stress in *Phaseolus mungo*.
- ◆ Isolated, identified and submitted halo-tolerant rhizobacterial strains *Bacillus fortis* SSB21 and *Pseudomonas aeruginosa* SSB13 capable to alleviate salt stress in *Capsicum annum*.