

**Dr. Shahbaz Nasir Khan**

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**PERSONAL INFORMATION**

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| Pakistan Engineering Council # | AGRI/3343   |
| Office Address                 | Department of Structures and Environmental Engineering, Faculty of Agricultural Engineering and Technology, University of Agriculture, Faisalabad, Punjab, Pakistan |

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**EDUCATION**

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**ACADEMIC QUALIFICATIONS**

**Ph.D. Agricultural Engineering** (2021) University of Agriculture, Faisalabad, Pakistan

**Thesis title:** “Development of constructed wetlands to reuse textile industrial effluent for wastewater irrigation by using phytotechnologies”

**M.Sc. (Hons.) Agricultural Engineering** (2013) University of Agriculture, Faisalabad.

**Thesis title:** “Using borehole and resistivity data for designing skimming well”

**B.Sc. Agricultural Engineering** (2011) University of Agriculture, Faisalabad.

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**PROFESSIONAL EXPERIENCE**

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**APPOINTMENTS**

- 1. Assistant Executive Engineer (Lab. Engineer)** in the Department of Irrigation and Drainage, Faculty of Agricultural Engineering and Technology, University of Agriculture Faisalabad, Punjab, Pakistan.  
Duration **September 2013 to- September 2014** (01 year)
  - 2. Lecturer (Permanent/Regular)** in the Department of Structures and Environmental Engineering, Faculty of Agricultural Engineering and Technology, University of Agriculture Faisalabad, Punjab, Pakistan.  
Duration : **September 2014 to August 2024** (10 years)
  - 3. Assistant Professor (Permanent/Regular)** in the Department of Structures and Environmental Engineering, Faculty of Agricultural Engineering and Technology, University of Agriculture Faisalabad, Punjab, Pakistan.  
Duration : **22, August 2024 to date**
- Guest Editor** of Special Issue on” Global Water Risks Across Shared River Corridors in Transboundary Basins”, of Water Journal.
  - Reviewer** of MDPI journals i.e. WATER, APPLIED SCIENCES and POLLUTANTS

Dr. Shahbaz Nasir Khan (Assistant Professor), Department of Structures and Environmental Engineering, Faculty of Agricultural Engineering and Technology, Pakistan

- Elected **Councillor** Academic Staff Association 2022-24 from Faculty of Agricultural Engineering and Technology, University of Agriculture Faisalabad.
- Working as **Tutor** in Tutorial Management Group under the guidance of Senior Tutor Office, University of Agriculture Faisalabad.
- Working as **Internship Coordinator** in Department of Structure and Environmental Engineering, University of Agriculture Faisalabad.
- Working as **Convener** PLO Assessment Committee under Outcome Based Education
- Member of University **Outreach Committee** from Faculty of Agricultural Engineering and Technology.

#### **MEMBERSHIP OF PROFESSIONAL BODY**

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1. **Registered Engineer** and lifetime member of the Pakistan Engineering Council, Islamabad, Pakistan.
2. A Member of the Foundation of Agricultural Engineers

#### **TEACHING (11 years)**

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##### **Post Graduate Courses Taught (M.Sc. / Ph.D. Engineering)**

1. Public Health Engineering
2. Water Supply and Wastewater Collection System
3. Environmental Management and Impact Assessment
4. Special Problem
5. Seminar

##### **Undergraduate Courses Taught (B.Sc. Engineering)**

6. Water Supply and Sewerage
7. Water Pollution Control
8. Environmental Impact Assessment
9. Agricultural Pollution and Control
10. Environmental Management Systems in Industry
11. Senior Project Design I & II
12. Project and Report I & II

## PUBLICATIONS

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### Research articles Published in (2025)

- 1- **Shahbaz Nasir Khan**, Anjum L, Arshad A, Ali S, Aleem M, Nasir A. Nature-Based Solution for Wastewater Treatment and Reuse Using Phytoremediation with Floating Plants. *Water*. (2025). (IF 3.1)
- 2- Hammad Hussain, Sonia Arshad, **Shahbaz Nasir Khan**, et al., Thermal Pyrolysis of Wasted High-density Plastic into Valuable Fuels Using Statistically Derived Kinetic Rate Constants. *Cleaner Chemical Engineering*. (2025).

### Research articles Published in (2024)

- 3- Aleem, M., **Shahbaz Nasir Khan\***, Akbar, M.U. et al. Ten Billion Tree Tsunami Project Reveals Climate Change Mitigation and Precipitation Increase in Khyber Pakhtunkhwa Province, Pakistan. *Earth Syst Environ* (2024). <https://doi.org/10.1007/s41748-024-00533-7> (IF 5.3)
- 4- Arshad, Muhammad Jawad, Sikandar Ali, **Shahbaz Nasir Khan**, Arfan Arshad, Jinping Liu, Faisal Mumtaz, Muhammad Mohsin Waqas, Barjeece Bashir, and Rao Husnain Arshad. 2024. "Multispectral Assessment of Net Radiations Using Comprehensive Multi-Satellite Data" *Water* 16, no. 23: 3378. <https://doi.org/10.3390/w16233378>

### International Reviewed Journal with Impact Factor (Published)

- 5- Tayyab, Muhammad, Rana Ammar Aslam, Umar Farooq, Sikandar Ali, **Shahbaz Nasir Khan**, Mazhar Iqbal, Muhammad Imran Khan, and Naeem Saddique. "Comparative Study of Geospatial Techniques for Interpolating Groundwater Quality Data in Agricultural Areas of Punjab, Pakistan." *Water* 16, no. 1 (2023): 139. (IF 3.4)
- 6- Anwar, Saba, Qamar Abbas Syed, Asad Ullah, Mehwish Arshad, **Shahbaz Nasir Khan**, and Muhammad Iftikhar Hussain. "Detection of heavy metals using atomic absorption and emission spectroscopy in drinking water of Faisalabad, Pakistan: microbial safety and quality status assessment." *Toxin Reviews* 43, no. 1 (2024): 1-17. (IF 3.8)
- 7- Rabeea Noor, Arfan Arshad, Muhammad Shafeeque, Jinping Liu, Azhar Baig, Shoaib Ali, Aarish Maqsood, Quoc Bao Pham, Adil Dilawar, **Shahbaz Nasir Khan**, Duong Tran Anh and Ahmed Elbeltagi. "Combining APHRODITE Rain Gauges-Based

Precipitation with Downscaled-TRMM Data to Translate High-Resolution Precipitation Estimates in the Indus Basin." Remote Sensing 2023 (IF 5.349)

- 8- Rana Ammar Aslam, Sangam Shrestha, Muhammad Nabeel Usman, **Shahbaz Nasir Khan**, Sikander Ali, Muhammad Shoib Sharif, Muhammad Waqas Sarwar, Naeem Saddique, Abid Sarwar, Mohib Ullah Ali, and Arfan Arshad. "Integrated SWAT-MODFLOW Modeling-Based Groundwater Adaption Policy Guidelines for Lahore, Pakistan under Projected Climate Change, and Human Development Scenarios". Atmosphere 2022 (IF 3.1)
- 9- Ahsan Saif Ullah, Haroon Rashid, **Shahbaz Nasir Khan**, Muhammad Umar Akbar, Arfan Arshad, Md. Masudur Rahman and Shumaila Mustafa. "A Localized Assessment of Groundwater Quality Status Using GIS-Based Water Quality Index in Industrial Zone of Faisalabad, Pakistan" Water 2022 (IF 3.52)
- 10- Muhammad Umer, **Shahbaz Nasir Khan**, Arfan Arshad, Rana Ammar Aslam, Hafiz Muhammad Safdar Khan, Haroon Rashid, Quoc Bao Pham, Abdul Nasir, Rabeea Noor, Khaled Mohamed Khedher and Duong Tran Anh "A modified approach to quantify aquifer vulnerability to pollution towards sustainable groundwater management in Irrigated Indus Basin" Environmental Science and Pollution Research 2022 (IF 4.22)
- 11- **Shahbaz Nasir Khan**, Abdul Nasir, Haroon Rashid and Zubair Aslam "A comparative study of wastewater quality analysis in major textile industrial zones of Faisalabad for irrigation use". Pakistan Journal of Agricultural Sciences. 2021 (IF 0.748)
- 12- Muhammad Shafeeque, Arfan Arshad, Ahmed Elbeltagi, Abid Sarwar, Quoc Bao Pham, **Shahbaz Nasir Khan**, Adil Dilawar, and Nadhir Al-Ansari "Understanding temporary reduction in atmospheric pollution and its impacts on coastal aquatic system during COVID-19 lockdown: a case study of South Asia". GEOMATICS, NATURAL HAZARDS, AND RISK. 2021 (IF 3.33)
- 13- Arfan Arshad, Saddam Hussain, Farhan Saleem, Muhammad Shafeeque **Shahbaz Nasir Khan**, Muhammad Sohail Waqas. "Unprecedented reduction in airborne aerosol particles and nitrogen dioxide level in 1 response to COVID-19 pandemic lockdown over the Indo-Pak region". Geophysical Research Letters. 2020 (IF 4.74)
- 14- Hafiz Muhammad Safdar Khan, **Shahbaz Nasir Khan**, Hafiz Ihsan ul Haq Khan, Haroon Rashid, Abdul Nasir and Adeel Mehmood. "Development and Performance Evaluation of Light Duty Hydraulically Operated Biomass Briquettes Forming Machine for Domestic Use". Journal of Mechanical Engineering Research and Developments. 2021 (HEC Y Category)

#### International Reviewed Journal without Impact Factor

- 15- Anam Maqsood, Haroon Rashid, **Shahbaz Nasir Khan**, Abdul Nasir, Nafeesa Aman, Ahsan Saif Ullah, Ahmad, Rana Ammar Aslam, Hafiz Muhammad Safdar Khan, Muhammad Akbar. "Wastewater Characterization of Chiniot Drain and Evaluation of Groundwater Contamination Using Water Quality Index (WQI) and GIS Techniques". Pollutants 2023.

- 16- Muhammad Imran, **Shahbaz Nasir Khan**, Saba Abid and Hafiz Muhammad Safdar Khan. "Performance Evaluation of Natural Coagulants for Wastewater Treatment". Science Heritage Journal, 2023.
- 17- Yousaf Hassan, **Shahbaz Nasir Khan**, Hafiz Muhammad Safdar Khan, Rana Ammar Aslam, Touseef Ahmed Babar, and Abdul Nasir "Evaluation of Treatment of Domestic Wastewater using Eicchornia Crassipes and Pistia Stratiotes by Phytotechnologies" Environmental Contaminants Reviews (ECR) 2021.
- 18- Rana Noman Saleem, **Shahbaz Nasir Khan**, Hafiz M. Safdar Khan, Abdul Nasir. "Productivity Comparison of Conventional and Single Slope Solar Still with Internal Reflectors: An Overview". Earth Sciences Pakistan. 2021
- 19- Muhammad Asadullah, **Shahbaz Nasir Khan**, Hafiz M. Safdar, Rana Ammar Aslam, Imran Shaukat. "Sustainability and Development of Aquaponics System: A Review". Earth Sciences Pakistan. 2020
- 20- Muhammad Auranzaib, **Shahbaz Nasir Khan**, Muneeb Ahmad, Muhammad Touseef, Abdul Nasir. "Developing Guidelines for Environmental Impact Assessment of Kashmir Underpass Project in Faisalabad". Engineering Heritage Journal. 2020
- 21- Touseef Ahmad Babar, **Shahbaz Nasir Khan**, Hafiz Muhammad Safdar Khan, Abdul Nasir, and Muhammad Umar. "Water Supply Scheme System Design for Peri Urban Areas of Punjab using EPANET". Pakistan Journal of Geology. 2020
- 22- Haroon Rashid, Ch. Arslan, **Shahbaz Nasir Khan**, Wastewater Irrigation, Its impacts on environment and health risk assessment in peri urban areas of Punjab Pakistan- A review. Environmental Contaminants Reviews (ECR) 2018
- 23- Arfan Arshad, Sikander Ali, **Shahbaz Nasir Khan**, Muhammad Riaz, Sufyan Arshad, Ch. Arslan, Shafqat Noor Design of floating wetland for treatment of municipal wastewater and environmental assessment using emergy technique Proceedings of the International Academy of Ecology and Environmental Sciences 2017

#### **List of Books/Proceedings/Monographs/Manuals/Book Chapters**

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1. Muhammad Usman Farid, Atta Ullah, Abdul Ghafoor, **Shahbaz Nasir Khan**, Mazhar Iqbal, Furqan Muhayodin, Abdul Shabbir, Chaudhry Arslan and Abdul Nasir. "Air Pollution and Clean Energy: Latest Trends and Future Perspectives" Intech Open Publications 2023
2. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Arfan Arshad, and Rana Ammar Aslam. "Emerging Technologies for Water Supply, Conservation and Management: Remote Sensing and GIS Based Techniques for Monitoring and Conserving Water on Newly Developed Farmlands" Springer Nature 2023
3. Manual for EPANET 2.0, Touseef Ahmed Babar and **Shahbaz Nasir Khan**
4. Easy way to learn GIS, **Shahbaz Nasir Khan**, and Prof. Dr. Allah Bakhsh

### **List of Abstracts/Conference Proceedings**

1. Muhammad Sami Altaf, **Shahbaz Nasir Khan**, Abdul Nasir, Moez Noor, Abubakar Shafique, Manan Aleem, Hassan Tariq. Water, Sanitation and Hygiene (WASH): Emphasizing the Value of Water in Promoting Sustainability. 8<sup>th</sup> International Water Conference (2024).
2. Wardah, **Shahbaz Nasir Khan**, Abdul Nasir, Rana Mansoor Hamza and Yasir Abbas. Water, Sanitation and Hygiene issues in Pakistan: Contribution of Engineers in Sustainable Development. 8<sup>th</sup> International Water Conference (2024).
3. Moez Noor, **Shahbaz Nasir Khan**, Abubakar Shafique, Sami Altaf, Yasir Abbas. Climate Change Adaptability, Water Governance & GLOF's: Effect of GLOF's on Climate Change. 8<sup>th</sup> International Water Conference (2024).
4. Mansoor Hamza, **Shahbaz Nasir Khan**, Wardah, Hassan Tariq, Haram Afzal. Adapting to Climate Change by Mitigating GLOFs in Pakistan. 8<sup>th</sup> International Water Conference (2024).
5. Abubakar Shafique, **Shahbaz Nasir Khan**, Abdul Nasir, Moez Noor, Muhammad Sami Altaf, Manan Aleem. Water Productivity: Water, Energy, Food Nexus & Hydro Diplomacy Sustainable Strategies of Water and Energy Use for Agricultural Products. 8<sup>th</sup> International Water Conference (2024).
6. Aliza Mehboob, **Shahbaz Nasir Khan**, Abdul Nasir, Yasir. Reduced Security Risks from Climate Change through Sustainable Agriculture in Pakistan. 8<sup>th</sup> International Water Conference (2024).
7. Maryam, **Shahbaz Nasir Khan**, Muhammad Jawad Arshad. A17-Enhancing Climate Resilience change in Agricultural crops. Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
8. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Arfan Arshad, Rana Ammar Aslam, Atta Ullah, Muhammad Shahbaz, Muhammad Jawad Arshad, Saqib Ali. A18-Investigation of Water Scarcity Dynamics in Anthropogenic region (South Asia). Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
9. Muhammad Moaez Noor, **Shahbaz Nasir Khan**, M. Abubakar Shafique, Sami Altaf, Manan Aleem, Ali Raza, Ali Hasnain. A35-Water Policy & Governance Challenges & Practices of Water Governance. Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
10. Mannan Aleem, **Shahbaz Nasir Khan**, Muhammad Ahmad Akram, Muhammad Maaz Tanveer, and Muhammad Abubakar Shafique. A60-Data, Models and Tools for Water Resources and Climate Change. Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
11. Muhammad Ahmad Akram, **Shahbaz Nasir Khan**, Mannan Aleem and Muhammad Hassan Ali. A61-Innovative Technologies for Agricultural Water Conservation and Management. Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
12. Hasan Tariq, **Shahbaz Nasir Khan**, Muhammad Abubakar Shafique. A93-[Water Policy and Governance] [WATER SECURITY IN CHANGING WORLD]. Proceedings of the National Conference on Climate Change and Water Resources (CCWR) Bridging the Gap for SDG6 (2024).
13. Mansoor Hamza, **Shahbaz Nasir Khan**, Muhammad Abubakar Shafique, Wardah, Muhammad Abdullah, Anam Ali. ICGWARM-3-SMM-7. Geo-Spatial Techniques for Soil Monitoring and Management. Proceedings of the International Conference on

“Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).

14. Yasir Abbas, Muhammad Zaman, **Shahbaz Nasir Khan**, Muhammad Adnan Shahid. ICGWARM-3-SMM-9. GIS Uses for Monitoring Soil Quality in Chiniot and Assessing PH and EC for Crop Productivity. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
15. Muhammad Abubakar Shafique, **Shahbaz Nasir Khan**, Abdul Nasir, Mansoor Hamza, Muhammad Ammad Bin Ayub, Muhammad Maaz Tanveer, Muhammad Ahmad Akram, Mannan Aleem, Muhammad Moaez Noor and Danyal Tariq. ICGWARM-3-SMM-10. Resources Inventories and Management Using Remote Sensing and Geospatial Techniques. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
16. Mannan Aleem, **Shahbaz Nasir Khan**, Danyal Tariq, Muhammad Ammad Bin Ayub, Muhammad Maaz Tanveer, Muhammad Abubakar Shafique and Muhammad Ahmad Akram. ICGWARM-4-CCM-2. Geo-informatics for Precision Agriculture and Climate Resilience. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
17. Muhammad Abubakar Shafique, **Shahbaz Nasir Khan**, Abdul Nasir, Mansoor Hamza, Muhammad Ammad Bin Ayub, Muhammad Maaz Tanveer, Muhammad Ahmad Akram, Mannan Aleem, Muhammad Moaez Noor and Danyal Tariq. ICGWARM-4-CCM-8. Geo-informatics for Crop Classification and Monitoring. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
18. Yasir Abbas, **Shahbaz Nasir Khan** and Muhammad Zaman. ICGWARM-5-CYE-1. Integration of Remote Sensing and Advanced Crop Models to Improve Crop Yield Estimation: a review. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
19. Wardah, Abdul Nasir, **Shahbaz Nasir Khan**, Mansoor Hamza, Tayyaba Saleem and Muhammad Umer Saleem, Muhammad Abdullah, Anam Ali. ICGWARM-5-CYE-11. Application of Remote Sensing in Mapping Rice Area and Yield Forecasting. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
20. Muhammad Moaez Noor, **Shahbaz Nasir Khan**, Ali Raza, Muhammad Abubakar Shafique, Sharoon Aftab, Shoaib Sarwar and Saffi-Ur-Rehman. ICGWARM-8-FM-6. Geo-informatics for Flood Monitoring and Management. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
21. Danyal Tariq, **Shahbaz Nasir Khan**, Mannan Aleem, Muhammad Ahmad Akram, Muhammad Ammad Bin Ayub and Muhammad Maaz Tanveer. ICGWARM-8-FM-7. Integration GIS and Hydrological Modelling for Proactive Flood Management and Strengthening Boundaries for Resilient Riverine Communities. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).
22. Muhammad Ahmad Akram, **Shahbaz Nasir Khan**, Mannan Aleem, Muhammad Ammad Bin Ayub, Muhammad Maaz Tanveer, Muhammad Abubakar Shafique and Danyal Tariq. Floodplain Inundation Mapping and Early Warning for Indus River Basin Using Sentinel-1 SAR Data. ICGWARM-8-FM-9. Proceedings of the International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM)” (2024).

- 23.
24. Jevan Bahadar, **Shahbaz Nasir Khan**, Abdul Nasir, Muhammad Abubakar Shafique, Muhammad Moaez Noor and Umer Maqsood. Mitigating climate change effects on fodder and livestock through innovative approaches. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
25. Asif Ali, **Shahbaz Nasir Khan**, Hasan Tariq. Climate-resilient feed production: Balancing economic sustainability and environmental stewardship in the face of climate change. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
26. Wardah, **Shahbaz Nasir Khan**, Mansoor Hamza, Yasir Abbas. Impact of climate change on fodder and livestock productivity. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
27. Ali Raza, Abdul Nasir, **Shahbaz Nasir Khan**, Mansoor Hamza, Yasir Abbas, Haram Afzal. Fodder production in climate shift paradigm. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
28. Mansoor Hamza, **Shahbaz Nasir Khan**, Ali Raza, Tayyaba Saleem, Muhammad Umer Saleem, Ana Javaid, Wardah. Sustainable fodder production in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
29. Asif Ali, **Shahbaz Nasir Khan**, Nimra Noor. Sustainable fodder production strategies for a warming world. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
30. Muhammad Abubakar Shafique, **Shahbaz Nasir Khan**, Abdul Nasir, Muhammad Moaez Noor, Sami Altaf, Mannan Aleem, Umer Maqsood. Essential nutrients for fodders in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
31. Muhammad Moaez Noor, **Shahbaz Nasir Khan**, M. Abubakar Shafique, Sami Altaf, Manan Aleem, Umer Maqsood. Significance of fodder for animals’ health. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
32. Mannan Aleem, **Shahbaz Nasir Khan**, M. Moaez Noor, M. Sami Altaf, Muhammad Abubakar Shafique, M. Hassan Ali. Enhancing fodder nutritional value by mitigating antinutritional effect of Tannin. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
33. Yasir Abbas, **Shahbaz Nasir Khan**, Ali Raza, Wardah, Beenish Ghous, Bint-e-Zahra. Improving fodder processing and conservation techniques for sustainable livestock nutrition and agricultural productivity in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
34. Muhammad Sami Altaf, **Shahbaz Nasir Khan**, M Abubakar Shafique, Mannan Aleem, Muhammad Moiz Noor, Umer Maqsood. The role of agricultural engineers in the dairy industry. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Better Dairy Production” (2023)
35. **Shahbaz Nasir Khan**, Muhammad Shahzaib and Muhammad Umer Farooq. “Integrate Building Information Modelling (BIM) in Location and Transportation Analysis in the



LEED Certification Process". International Conference on Sustainable Development in Civil Engineering. 2023.

36. Zahoor, Abdul Rehman, **Shahbaz Nasir Khan**, Arfan Arshad, and Rana Ammar Aslam. "Remote Sensing and GIS Based Techniques for Monitoring and Conserving Water on Newly Developed Farmlands." In Emerging Technologies for Water Supply, Conservation and Management, pp. 83-107. Cham: Springer International Publishing, 2023.
37. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Arfan Arshad, Rana Ammar Aslam, Atta Ullah and Saqib Ali. Remote Sensing and GIS approaches for integrated water management and sustainable food production in urbanizing regions. International Conference on Sustainable Development in Civil Engineering. 2023.
38. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Arfan Arshad, Rana Ammar Aslam, Atta Ullah and Saqib Ali. Sustaining agricultural resilience and mitigating emissions for global food security in a changing climate. International Conference on Sustainable Development in Civil Engineering. 2023.
39. Sibtain Yaseen, **Shahbaz Nasir Khan**, Syed Muhammad Ali Hadi, Muhammad Haseeb, Muhammad Hassan Rafique, and Rushda Mujahid. Technology adoption and dissemination for improving agriculture. International Conference on Sustainable Development in Civil Engineering. 2023.
40. Yasir Abbas, **Shahbaz Nasir Khan**, Rao Muhammad Arif Saeed, Wardah and Namal Saeed. Development of modern poultry farms in Pakistan, International Conference on Sustainable Development in Civil Engineering. 2023.
41. Abdullah Khalid, **Shahbaz Nasir Khan**, Saira Shehzadi, Umair Ali, Saad Abid, Zain Ul Abidin. Agro Chemicals application and its impact on Environment, International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
42. Hasan Tariq, **Shahbaz Nasir Khan**, Saad Abid, Zain Ul Abidin, Umer Maqsood. Impact of Climate change on Ecosystem. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
43. Murtaza Ahmed and, **Shahbaz Nasir Khan**. Preparation of Compost using Kitchen Waste. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
44. Fakhar Abbas, **Shahbaz Nasir Khan**, Abdullah Khalid, Asif Ali, Saad Abid, Zain Ul Abidin. The role of CFCs in Ozone Layer Depletion. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
45. Umair Ali, **Shahbaz Nasir Khan**, Asif Ali, Saad Abid, Saad Abid, Abdullah Khalid. Scope of AI and Robotics in Agriculture. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
46. Ahmed Aslam, Rana Ammar Aslam, **Shahbaz Nasir Khan**. Impact analysis of climate change on water resources. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
47. Anum Haider and, **Shahbaz Nasir Khan**. Women-Led Climate Resilience. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
48. Saad Abid, **Shahbaz Nasir Khan**, Muhammad Waqar Akram, Hasan Tariq, Abdullah Khalid, Fakhar Abbas. Application of Robotics in Precision Agriculture. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).

49. Fakhar Abbas, **Shahbaz Nasir Khan**, Rana Ammar Aslam, Ch Arslan, Muhammad Usman Farid, Mazhar Iqbal, Aliza Mehboob. Scope of Hbv Hydrological Model in Flood Forecasting. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
50. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Arfan Arshad, Rana Ammar Aslam, Atta Ullah and Umer Maqsood. Remote sensing and GIS Approaches for Effective Water Management and Preservation in Newly Established Agricultural Lands. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
51. Abdul Rehman Zahoor, **Shahbaz Nasir Khan**, Rana Ammar Aslam, Muhammad Shahbaz, Atta Ullah, Arfan Arshad. Assessing Climate Change Impacts on Key Industrial Cities in Pakistan using Downscaled Aura OMI Satellite, Agriculture, and Environmental Proxies. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
52. Ahtisham ul Haq Zafar and, **Shahbaz Nasir Khan**. Reuse of Plastic Waste in Road Construction. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
53. Sheeza Hameed, Mubashra Iftikhar, Umer Maqsood, Amina Tariq, Afshan Sehar and **Shahbaz Nasir Khan**. Impact of Climate Change in Global Food Security. International Conference on Precision and Sustainable Agriculture under Climate Change (IPSAC-2023).
54. Jeven Bahadur, **Shahbaz Nasir Khan**, Abdul Nasir, Muhammad Abubakar Shafique, Muhammad Moaez Noor and Umer Maqsood. Mitigating Climate Change effects on fodder and livestock through innovative approaches. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
55. Asif Ali, **Shahbaz Nasir Khan**, Hasan Tariq. Climate-resilient feed production: Balancing economic sustainability and environmental stewardship in the face of climate change. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
56. Wardah, **Shahbaz Nasir Khan**, Mansoor Hamza, Yasir Abbas. Impact of Climate change on fodder and livestock productivity. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
57. Ali Raza, Abdul Nasir, **Shahbaz Nasir Khan**, Mansoor Hamza, Yasir Abbas, Haram Afzal. Fodder production in climate shift paradigm. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
58. **Shahbaz Nasir Khan**, Mansoor Hamza, Ali Raza, Tayyaba Saleem, Muhammad Umer Saleem, Ana Javed, Wardah. Sustainable Fodder production in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
59. Asif Ali, **Shahbaz Nasir Khan**, Nimra Noor. Sustainable Fodder production strategies for a warming world. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
60. Muhammad Abubakar Shafique, **Shahbaz Nasir Khan**, Abdul Nasir, Muhammad Moaez Noor, Mannan Aleem, Umer Maqsood. Essential nutrients for fodders in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
61. Muhammad Moaez Noor, **Shahbaz Nasir Khan**, Muhammad Abubakar Shafique, Sami Altaf, Manan Aleem, Umer Maqsood. Significance of fodder for animals’ health.

- International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
62. Manan Aleem, **Shahbaz Nasir Khan**, Muhammad Moaez Noor, Sami Altaf, Muhammad Abubakar Shafique, Muhammad Hassan Ali. Enhancing fodder nutritional value by mitigating antinutritional effect of Tannin. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
  63. Yasir Abbas, **Shahbaz Nasir Khan**, Ali Raza, Wardah, Beenish Ghous, Bint-e-Zahra. Improving fodder processing and conservation techniques for sustainable livestock nutrition and agricultural productivity in Pakistan. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
  64. Muhammad Sami Altaf, **Shahbaz Nasir Khan**, Muhammad Abubakar Shafique, Mannan Aleem, Muhammad Moaez Noor, Umer Maqsood. The role of Agricultural engineers in dairy industry. International Conference on “Fodder Production in Climate Shift Paradigm: Better Nutrition for Dairy Production.” (2023)
  65. Leveraging precision agricultural tools for food security. Mansoor Hamza, **Shahbaz Nasir Khan**, Ana Javid, Tayyaba Saleem and Muhammad Umer Saleem. International Conference on Sustainable Development in Civil Engineering. 2023.
  66. Ali Abbas, **Shahbaz Nasir Khan**, Mussawar Hussain, Asad Abbas, Huda Ghazanfar, Ali Danial, and Ali bin khalid. Plastic Waste Pollution: Its Sources, Impacts and Mitigation Measures. International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  67. Asad Abbas, **Shahbaz Nasir Khan**, Ali Abbas, Mussawar Hussain, Huda Ghazanfar, Ali bin Khalid, Ali Danial, and Ushra Kramat. Climate Change and Biodiversity. International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  68. Huda Ghazanfar, **Shahbaz Nasir Khan**, Musawar Hussain, Bushra Karamat, Ali Abbas, Asad Abbas, Ali Danial and Ali bin Khalid. Biodiversity conservation through climate change adaptation strategies. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  69. Huzaifa Bin Abid, **Shahbaz Nasir Khan**, Syed Asfar Hussain Shah, Hammad Shahid, Mohsin Waqar, and Awais Zafar. Role of Carbon Dioxide in Climate Change. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  70. Mohsin Waqar, **Shahbaz Nasir Khan**, Awais Zafar, Hammad Shahid, Huzaifa Bin Abid, Jamshaid Ali, and Syed Asfar Ali. Vertical Profiling of Air Pollution in Urban and Metro Cities. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  71. Muhammad Haseeb, **Shahbaz Nasir Khan**, Syed Ali Hadi, Muhammad Hassan Rafique, Abdul Moiz, and Rushda Mujahid. Sewage Sludge and its Application. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  72. Mussawar Hussain, **Shahbaz Nasir Khan**, Ali Abbas, Huda Ghazanfar, Bushra Kramat, Asad Abbas, Ali bin Khalid and Ali Daniyal. Increasing Population: A threat to Environmental Sustainability. International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
  73. Rushda Mujahid, **Shahbaz Nasir Khan**, Abdul Moiz, Muhammad Hassan Rafique, Syed Ali Hadi, and Muhammad Haseeb. Recycling and Reuse of Building Material in Construction. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.

74. Syed Asfar Hussain Shah, **Shahbaz Nasir Khan**, Awais Zafar, M. Hammad Shahid, Huzaifa bin Abid, and Mohsin Waqar. The Impact of Electricity Generation on the Environment. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
75. Asad Abbas, **Shahbaz Nasir Khan**, Ali Abbas, Musawar Hussain, Huda Ghazanfer, Ali bin Khalid, Ali Danial and Bushra Kramat. Climate Change and Biodiversity. . International Conference on Interdisciplinary Research Innovations, PARS campus, University of Agriculture, Faisalabad, 2022.
76. Huzaifa Bin Abid and **Shahbaz Nasir Khan**. Climate Change- A Potential Threat to Maritime Security. 7<sup>th</sup> International Water Conference at Riphah University, Islamabad 2022.
77. Asad Abbas, **Shahbaz Nasir Khan**, Ali Abbas, Ali Danial, Mussawar Hussain, and Ali bin Khalid. Glacial Lake Outburst Floods and Climate Change in Pakistan . 7<sup>th</sup> International Water Conference at Riphah University, Islamabad 2022.
78. Sameen Fatima, **Shahbaz Nasir Khan**, Abdul Nasir and Umer Maqsood, Green technology for wastewater treatment. PSHS, International Horticulture Conference, Institute of Agricultural Sciences, Punjab University Lahore, 2020.
79. Muhammad Shahzaib, **Shahbaz Nasir Khan** and Abdul Nasir, Green building. PSHS, International Horticulture Conference, Institute of Agricultural Sciences, Punjab University Lahore, 2020.
80. Naveed Ahmad Khan and **Shahbaz Nasir Khan**, Impact of industrial wastewater on groundwater quality, 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
81. Muhammad Asad Ullah, **Shahbaz Nasir Khan** and Muhammad Umer. Application of nanoparticle in water purification and wastewater treatment, 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
82. Muhammad Shahzaib and **Shahbaz Nasir Khan**, Wastewater treatment by using micro-algae, 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
83. Muhammad Asad Ullah, **Shahbaz Nasir Khan** and Muhammad Umer. Wind: A Renewable and Sustainable Source of Energy, 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
84. Usama Zafar, **Shahbaz Nasir Khan**, Abdul Moiz and Abdul Nasir. Operation of drip irrigation using biogas as energy source, 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
85. Touseef Ahmad Babar, **Shahbaz Nasir Khan**, Muhammad Umer, Muhammad Umar Masood, Amina Manzoor, Muhammad Touseef and Ahsan Saif Ullah. Assessment of Noise Levels in Faisalabad. 18<sup>th</sup> International Congress of Soil Science, Sindh Agriculture University Tando Jam, 2020.
86. Muhammad Touseef, **Shahbaz Nasir Khan** and Umer Maqsood. Waste to Energy: An approach towards clean energy, International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
87. Awais Bin Aqib, Sidra Ashfaq and **Shahbaz Nasir Khan**. Performance of solar chimney dryer for vegetable drying. International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
88. Muhammad Gufran Ali, Sikander Ali, Amina Manzoor, **Shahbaz Nasir Khan**, M. Arshad and Abdul Nasir. Performance evaluation of lysimeter with indirect method,

- International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
89. Drakhshan Ansari and **Shahbaz Nasir Khan**. Hydropower potential for the production of electricity in Pakistan, International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
90. Touseef Ahmad Babar and **Shahbaz Nasir Khan**. Potential of solar thermal power in Pakistan, International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
91. Abdul Moiz, **Shahbaz Nasir Khan**, Abdul Nasir and Umer Maqsood. Role of biogas to overcome the energy crises in Pakistan, International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
92. Naveed Ahmad Khan, **Shahbaz Nasir Khan**, Touseef Ahmad Babar and Abdul Nasir. Potential of eco-friendly vehicles in controlling emissions, International Conference on Green Energy Technologies: Opportunities and Challenges, University of Agriculture Faisalabad. 2019
93. **Shahbaz Nasir Khan**, Abdul Nasir, Haroon Rashid, Zubair Aslam Treatment of Textile Effluents by using Aquatic Plants (Phytoremediation) In Faisalabad, Pakistan Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
94. **Shahbaz Nasir Khan**, Arfan Arshad, Abdul Nasir, Mohsin Noor, Water Footprint Accounting of Cotton Production in Pakistan: Formulating Water Footprint Response Strategies to Sustain Environment. Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
95. Mohsin Noor, Dr. Abdul Nasir, **Shahbaz Nasir Khan**, Hafiz Muhammad Safdar Khan, Imran Shouket, Hafiz Ihsan ul Haq Khan, Bioremediation of Contaminated Soil using Phytotransformation Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
96. Umer Maqsood, M. Azam Khan, **Shahbaz Nasir Khan**, Usman Masood In-stream nitrogen removal in anthropogenic impacted river network Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
97. Umer Maqsood, M. Azam Khan, Usman Maqsood, **Shahbaz Nasir Khan** Iot Sensors: A Road Map to Future Farming, Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
98. Abdul ur Rehman, Allah Bakhsh, **Shahbaz Nasir Khan**, Evaluation of Management Zones in precision farming Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF)
99. M. Bilal Ahsan, **Shahbaz Nasir Khan**, Abdul Nasir Performance Evaluation of Biogas Plant for Household Use, Water Footprints of the Cotton – Textile value chain: Environmental Repercussions from Field to Hanger (UAF) 2019
100. Touseef Ahmad Babar, **Shahbaz Nasir Khan**, Muhammad Umar, Design of Water Supply System by Using EPANET, International Symposium: Technologies and Materials for Renewable Energy Environment & Sustainability (UAF) 2019
101. Muhammad Farooq Anwar and **Shahbaz Nasir Khan**, Design of Zigzag Brick Kiln to Reduce Air Pollution International Symposium: Technologies and Materials for Renewable Energy Environment & Sustainability (UAF) 2019
102. Muhammad Nabeel Riaz, **Shahbaz Nasir Khan**, Purification of Water by Moringa Oleifera Seeds International Symposium: Technologies and Materials for Renewable Energy Environment & Sustainability (UAF), 2019

103. M. Bilal Ahsan, **Shahbaz Nasir Khan**, Arfan Arshad, Remote Sensing (Rs) and Land Surface Temperature (Lst) Application in Assessment of Urban Heat Island: A Review International Symposium: Technologies and Materials for Renewable Energy Environment & Sustainability (UAF) 2019
104. Haris bin Asif and **Shahbaz Nasir Khan**, Purification of Canal Water using different Textile Fabrics, 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
105. Touseef Ahmad Babar and **Shahbaz Nasir Khan**, Water Borne Diseases by Poor Water Supply System, 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
106. Muhammad Faizan Aslam and **Shahbaz Nasir Khan**. Groundwater Management Strategies for District Chakwal, Punjab- Pakistan, 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
107. Muhammad Saim Tahir and **Shahbaz Nasir Khan** Status of Air Pollution due to PM 2.5 in Faisalabad Pakistan 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
108. Muhammad Umar Akbar, **Shahbaz Nasir Khan**, Ahsan Saif Ullah, Mohsin Noor and Adnan Shakeel Bioremediation of Municipal Wastewater: A Case Study 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
109. Faiza Kashif, **Shahbaz Nasir Khan** and Ali Raza Biological Treatment of Textile Wastewater in Faisalabad using Aquatic Plant, Water Hyacinth 1<sup>st</sup> International Conference on Surface Science: Innovations and Applications for Geoenvironmental Challenges (ISES, UAF) 2019
110. **Shahbaz Nasir Khan**, Abdul Nasir, Potential use of phytoremediation technology for industrial wastewater treatment in city Faisalabad, Pakistan International Workshop on Phyto-technologies for Environmental Clean-up. (NUST ISB) 2018

#### PROJECT DEVELOPMENT AND WORKING

| S. no | Project Title  | Funding Agency                         | Duration              | Role             | Present Status |
|-------|--|--|-----------------------|------------------|----------------|
| 1     | Development of Constructed Wetlands to reuse Textile Industrial Effluent for Wastewater Irrigation by using Phyto-technologies | ORIC, UAF                              | 1 year (2019 to 2020) | As Ph. D Student | Completed      |
| 2     | Development of an indigenous automatic air gases monitoring system to control unwanted accidents                               | National Cleaner Production Center, PK | 1 year (2022 to 2023) | As PI            | Completed      |
| 3     | Converting Agriculture Waste into Biofuel Briquettes for Sustainable Development   | National Cleaner Production Center, PK | 1 year (2025 to 2026) | As PI            | On-going       |

### SUPERVISION OF POSTGRADUATE STUDENTS (Main Supervisor)

| No. | Name                  | Degree                              | Research Title  | Year      |
|-----|-----------------------|-------------------------------------|---|-----------|
| 1   | Zainab Siddique       | Ph.D.<br>Agricultural Engineering   | Not decided yet   | 2024-2028 |
| 2   | Yousaf Hassan         | M. Sc.<br>Environmental Engineering | Treatment of wastewater using Eicchornia crassipes and Pistia strateotes  | 2021      |
| 3   | Muhammad Touseef      | M.Sc.<br>Agricultural Engineering   | Assessment of spatiotemporal variations in air pollutants in major cities of Punjab, Pakistan   | 2021      |
| 4   | M. Umar Akbar         | M.Sc.<br>Agricultural Engineering   | A Novel Approach to Quantify Groundwater Vulnerability Zones Based on an Improved Recharge Factor and Rating Scale Using an Integrated Modeling Framework | 2021      |
| 5   | Touseef Ahmad Babar   | M.Sc.<br>Agricultural Engineering   | Treatment of wastewater using floating mats technology  | 2022      |
| 6   | Muhammad Farooq Anwar | M.Sc.<br>Agricultural Engineering   | Removal of heavy metals from tannery wastewater using the Phytoremediation technique  | 2022      |
| 7   | Muhammad Muneeb       | M.Sc.<br>Environmental Engineering  | Treatment of Industrial Wastewater by using the Charcoal  | 2024      |
| 8   | Abdur-Rehman Zahoor   | M.Sc.<br>Agricultural Engineering   | Downscaling of OMI satellite data (Aura) over major industrial cities of Pakistan and its influence on socio-economy and environmental proxies            | 2023      |
| 9   | Hafiz Sheraz          | M.Sc.<br>Environmental Engineering  | Impact Assessment of Spatial variation of groundwater level in Lahore   | 2025      |
| 10  | Hamna Zahid           | M.Sc.<br>Agricultural Engineering   | Geospatial Modeling for Reconstructing High Resolution (1 Km) Groundwater Quality Data in Data-Scare Agro-Urbanized Regions Punjab Pakistan.              | 2024      |
| 11  | Mohamad Alhousain     | M.Sc.<br>Agricultural Engineering   | Investigating the Role of Typha Latifolia and Water Hyacinth in Improving Textile Wastewater Quality  | 2025      |
| 12  | Zainab Siddique       | M.Sc.<br>Environmental Engineering  | Optimizing Hempcrete Blocks with Alternating Binding Materials.   | 2024      |
| 13  | Mubarra Tehreem       | M.Sc.<br>Agricultural Engineering   | Preparation of Sustainable Bio Bricks using Hemp and Crop Residues.   | 2024      |
| 14  | Hammad Shoukat        | M.Sc.<br>Agricultural Engineering   | Development of ZSM-5/Al <sub>2</sub> O <sub>3</sub> /NiO Composite Catalyst Systems for   | 2025      |

|    |                    |                                 |   |         |
|----|--------------------|---------------------------------|---|---------|
|    |                    |                                 | Microwave Heat Driven Recycling of Municipal Plastic Waste. |         |
| 15 | Mannan Aleem       | M.Sc. Agricultural Engineering  | Not decided yet   | 2024-26 |
| 16 | Muhammad Moez Noor | M.Sc. Agricultural Engineering  | Not decided yet   | 2024-26 |
| 17 | Mansoor Hamza      | M.Sc. Agricultural Engineering  | Not decided yet   | 2024-26 |
| 18 | Huzaifa bin Abid   | M.Sc. Environmental Engineering | Not decided yet   | 2024-26 |
| 19 | M. Hashir          | M.Sc. Agricultural Engineering  | Not decided yet   | 2024-26 |

**(2<sup>nd</sup> Member in Supervisory Committee)**

| No. | Name            | Degree                           | Research Title  | Year |
|-----|-----------------|----------------------------------|---|------|
| 1   | Ameer Ahmad     | M. Sc. Environmental Engineering | Biogas Production Potential Assessment of Food Waste Co Digested with Biogas Slurry   | 2021 |
| 2   | Muhammad Umer   | M.Sc. Agricultural Engineering   | Characterization of Biomass Briquettes Produced from Crop Residues as an Alternative Sustainable Energy Solution  | 2021 |
| 3   | Ahsan Saif      | M.Sc. Agricultural Engineering   | Assessment of groundwater quality status by using Water quality index (WQI) and Geographical information system (GIS) approaches in industrial region of Faisalabad | 2021 |
| 4   | Ahmad           | M.Sc. Agricultural Engineering   | Performance Evaluation of Effect of Sewage as Additive on Physico-Chemical Characteristics of Compost from Various Organic Waste                                    | 2021 |
| 4   | Muhammad Tayyab | M. Sc. Environmental Engineering | Comparative analysis of geospatial techniques for interpolating groundwater quality data in Punjab, Pakistan  | 2022 |
| 5   | Muhammad Saad   | M.Sc. Agricultural Engineering   | Detection of Disorder in Tomato Plant leaf by artificial intelligence   | 2023 |
| 6   | Saba Abid       | M.Sc. Agricultural Engineering   | Preparation of compost using various solid wastes   | 2024 |



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[Dr. Shahbaz Nasir Khan \(Assistant Professor\) - Google Scholar](#)

[Shahbaz Nasir Khan \(researchgate.net\)](#)