

Curriculum Vitae of DR. TARIQ AZIZ

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<https://initrogen.org/content/tariq-aziz>

<https://web.uaf.edu.pk/FacultyProfile/Profile/516>

Associate Professor (Soil Science)

University of Agriculture, Faisalabad

Regional Director (South Asia)

International Nitrogen Initiative (INI) www.initrogen.org

Member Steering Committee

Global Partnership on Nutrient Management (GPNM)

United Nations Environment Programme (UNEP)

ACADEMIC AND PROFESSIONAL DISTINCTIONS

1. Best Research Paper Award 5th and 6th HEC Outstanding Research Awards, 2013-14 and 2014-15
2. Research Productivity Award (2012 & 2013) by Pakistan Council of Science & Technology.
3. **Adjunct Faculty at School of Plant Biology**, University of Western Australia. (2011-2017)
4. Post Doc Fellowship 2010 at University of Western Australia, Australia, under the supervision of **Prof. Hans Lambers, Head, School of Plant Biology, UWA.**
5. Visiting Scientist at Institute of Plant Nutrition, **JLU, Giessen, Germany** (6 months) from German Exchange Program (DAAD), 2005.
6. Merit Scholarship for Ph.D. studies from Higher Education Commission, Islamabad

FUNDED RESEARCH PROJECTS

AWARDED

1. Principal Investigator (Pak Chapter) in **South Asian Nitrogen Hub**, funded by UKRI under GCRF, UK (Total Project Cost: **19.6 Million pounds**) (2019-2023). Pak. Share: 380000/- GBP equivalent to Pak Rs. 80 million).
2. Team member of ICARDA led USDA funded project “Fertilizer Right Pakistan”, PI Dr Aamer Maqsood, worth USD **65000**.
3. Co-PI in “Improvement in citrus productivity and quality by standardization of nutrient assessment protocols for optimization of nutrient applications” by ALP, PARC, amounting Rs. 3.154 million. 2018-20

4. As Team Leader (Pakistan) in a collaborative research project “Sustainable production of bioenergy and soil conditioners from bio residues in Pakistan for energy and food supply” funded by German Government. Total amount: **Euro 100,000.** (2018-19)
5. As PI of research project "Enhancing nutrient use efficiency and fortifying food crops through microbially synthesized nano-fertilizers (bio-nano-fertilizer)” funded by HEC. Total amount Pak. **Rs. 3.65 million.** 2018-21
6. As Principal Investigator of research project “Use of Silicon for amelioration of salinity stress in maize: A sustainable approach” funded by HEC. Total amount: Pak. **Rs. 2.234 million.** 2012-14.
7. As Principal Investigator of research project “Testing of Enhanced Efficiency Fertilizers” funded by Fauji Fertilizer Company (Pvt.) Ltd. MoU signed between UAF and FFC. Pak. Rs. **0.3 million.** (2016)
8. As Co-Principal Investigator of project “Zinc biofortification of wheat grains through farmers’ friendly approaches’ funded by HEC. Total amount: Pak. **Rs. 2.34 million.** 2011-13.
9. As Co-Principal Investigator of project “Enhancing Bioavailable Zn content in Lentil: A means to higher profits and improved Zn nutrition for rural Punjab” funded by HEC. Rs. 2.3 Million 2018-20.
10. As team Member of Internationally funded project “Nitrogen budgeting in Indus Basin of Pakistan” by ICARDA, **Total Amount: US\$ 10,000/-.** 2017

SUPERVISION OF RESEARCH STUDENTS

| M.Sc. (Hons.) | Produced: | Currently enrolled |
|---------------------------------|------------------|---------------------------|
| Supervisor | 50 | 4 |
| Member of supervisory committee | 90 | 6 |
| Ph.D. | | |
| Supervisor | 5 | 0 |
| Member of supervisory committee | 10 | 2 |

PUBLICATIONS:

BOOKS

1. Abbas, A., Yang, A., Aziz, T., Wakeel, A. (2024) Pakistan Nitrogen Policy Report: Scientific Evidence, Current Initiatives and Policy Landscape. South Asia Nitrogen Hub (SANH) Policy Paper PP2. Faisalabad.
2. Brownlie, W.J., Aziz, T., Sutton, M.A., and Yan, X., (2024) Nitrogen Mitigation. INMS Guidance Document on Measures for Sustainable Nitrogen Management. INMS Guidance Document Series (Series Editors: M.A. Sutton, M. Schlegel, J. Baron and H.J.M. Van Grinsven). International Nitrogen Management System, UK Centre for Ecology & Hydrology, Edinburgh, UK. ISBN: 978-1-906698-90-4. DOI: 10.5281/zenodo.13831114.

3. Tariq Aziz et al., (Eds) 2021. Nitrogen Assessment; Pakistan as a case study. Elsevier Academic Press Publishers, USA.

BOOK CHAPTERS

1. Nitrous oxide scenarios and abatement measures. 2024. CHAPTER 3 in: United Nations Environment Programme and Food and Agriculture Organization. 2024. Global Nitrous Oxide Assessment. Nairobi. <https://doi.org/10.59117/20.500.11822/46562>. pp.65-86.
2. Awan, M.I, M. I. Sohail, S. Hussain, M.A. Maqsood, M Nasim, and Tariq Aziz. 2024. Nitrogen Use Efficiency and Agricultural Sustainability. In: Rehman, M., J.C. Biswas and R.S. Meena Eds., Climate Change and Soil-Water-Plant Nexus, Agriculture & Environment. Springer Nature, Singapore. <https://doi.org/10.1007/978-981-97-6635-2>
3. Aziz T., A. Wakeel, A.N. Shahzad, R Rees and M. Sutton. 2021. Rethinking nitrogen use: need to plan beyond present. In: Nitrogen Assessment; Pakistan as a case study. Elsevier Publishers, USA. Pp.1-10
4. Awan, M.I., S. Raza, A Farooq, A. Nawaz and T. Aziz. 2021. Drivers of increased nitrogen use in Pakistan. In: Nitrogen Assessment; Pakistan as a case study. Elsevier Publishers, USA. Pp. 53-68.
5. Singh, B., H. M Bilal and T. Aziz. 2021. Nitrogen use efficiency in crop production: issues and challenges in South Asia. In: Nitrogen Assessment; Pakistan as a case study. Elsevier Publishers, USA. Pp.127-143.
6. Watto, M.A. T. Aziz, A Wakeel, W Ahmad, Abdul Jalil Marwat and Munir Hussain Zia. 2021. Pathways to sustainable nitrogen use and management in Pakistan. In: Nitrogen Assessment; Pakistan as a case study. Elsevier Publishers, pp. 177-189.

RESEARCH ARTICLES IN PEER REVIEWED INTERNATIONAL JOURNALS

2025

- 1 Wakeel, A., A. Qadeer, Z. Bano, M.R. Shahid, M. Rizwan, A. Kiran, M. Sanaullah, T. Aziz, R.M. Rees, A. Bhatia and J. Drewer. 2025. Managing Fertilizer Rates and Tillage Depth to Improve Nitrogen Use Efficiency and Soil Health. Journal of Soil Science and Plant Nutrition <https://doi.org/10.1007/s42729-025-02310-5>

2024

- 1 Rasheed, N., M.A. Maqsood, T. Aziz, M.I. Ashraf, I. Saleem, S. Ehsan, A. Nawaz, H.M. Bilal and M. Xu. Zinc portioning and allocation patterns among various tissues confers variations in Zn use efficiency and bioavailability in lentil genotypes. Frontiers Plant Sci. 14; 1325370, doi.org/10.3389/fpls.2023.1325370

2023

- 1 Farooq, A., B. Saeed, H.M. Bilal, M.A. Maqsood, M. Nasim, T. Aziz and X. Mingang. 2023. Solubilization and uptake of phosphorus (P) by wheat and maize crops from indigenous rock

phosphate applied with biogas slurry and bagasse ash. *Water, Air, Soil Pollution* 234:709.

- 2 Möhring, N., Kanter, D., Aziz, T. et al. Successful implementation of global targets to reduce nutrient and pesticide pollution requires suitable indicators. *Nat Ecol Evol* (2023). **7**, 1556–1559 <https://lnkd.in/eZTchKcX>
- 3 Amin, S., T. Aziz, M. Z. Rehman, I. Saleem, M. Rizwan, A. Ashar, H. A. Mussawar, M.A. Maqsood. Zinc oxide nanoparticles coated urea enhances nitrogen efficiency and zinc bioavailability in wheat in alkaline calcareous soils. *Environmental Science and Pollution Research* 30: 70121-70130 <https://doi.org/10.1007/s11356-023-27209-5>
- 4 Ashraf, M.I., M.A. Maqsood, Tariq Aziz and M. F. Saleem. 2023. Elemental sulfur-assisted iron and zinc fortification for potential growth enhancement in canola under alkaline soil. *Soil and Environment* 42(2):223-235 [10.25252/SE/2023/243255](https://doi.org/10.25252/SE/2023/243255)

2022

- 1 Abrar et al., 2022. Long-term manure application enhances organic carbon and nitrogen stocks in Mollisol subsoil. *Land Degradation & Development*. **34**(3): 815-832 <https://doi.org/10.1002/ldr.4498>
- 2 Saeed, M.T. et al., 2022. Nutrient Accumulation During Vegetative and Reproductive Growth Affected by Endogenous and Exogenous Phosphorus Applications in Maize Crop. *Commun. Soil Sci. Plant Analysis* 54(7): 895-909. <https://doi.org/10.1080/00103624.2022.2137180>
- 3 Ehsan, S., M. A. Maqsood, A. Muhmood, G. W. Price and Tariq Aziz. Recycled biowaste improved soil physical properties of alkaline soil and wheat performance, *Arabian Journal of Geosciences* (2022) 15:1282 <https://doi.org/10.1007/s12517-022-10558-9>.
- 4 Hameed, M.K. et al., 2022. Differential Metabolic Responses of Lettuce Grown in Soil, Substrate and Hydroponic Cultivation Systems under NH₄⁺/NO₃⁻ Application. *Metabolites* 12(5): 444 [DOI: 10.3390/metabo12050444](https://doi.org/10.3390/metabo12050444)
- 5 Ashraf, N., C. Hu, X. Xu, **Tariq Aziz**, L. Wu, M. A. Waqas, M. Farooq, X. Hu, W. Zhang, M. Xu. Long-term manure application increased soil organic carbon and nitrogen mineralization through the accumulation of unprotected and physically protected carbon fractions. *Pedosphere* <https://doi.org/10.1016/j.pedsph.2022.06.047>
- 6 Raghuram N, **Tariq Aziz** , S. Kant , J. Zhou and S. Schmidt. Editorial: Nitrogen Use Efficiency and Sustainable Nitrogen Management in Crop Plants. *Front. Plant Sci.* doi: 10.3389/fpls.2022.862091
- 7 Sohail, M.I., M.Z. Rehman, **T. Aziz**, et al. Iron bio-fortification and heavy metal/(loid)s contamination in cereals: successes, issues, and challenges. *Crop & Pasture Science* <https://doi.org/10.1071/CP21771>
- 8 Bansal et al. Long-term trends of direct nitrous oxide emission from fuel combustion in South Asia". *Environ. Res. Lett.* 17 045028. 10.1088/1748-9326/ac5cf7

- 9 Umar, W., I. Czinkotaa, M. Gulyásb, **Tariq Aziz**, M. K. Hameed. Development and characterization of slow-release N and Zn fertilizer by coating urea with Zn fortified nano-bentonite and ZnO NPs using various binders. **Environmental Technology & Innovation** <https://doi.org/10.1016/j.eti.2021.102250>.
- 10 Saqib, M., A. Khaliq, A. Tanvir and **Tariq Aziz**. Impact of different nitrogen management options and weed competition periods on weed dynamics, productivity, and profitability of bread wheat. *Arabian J Geosciences* 15(9):865 10.1007/s12517-022-10146-x

2021

- 1 Nawaz, A., M.A. Maqsood, M.I. Awan and **Tariq Aziz**. Comparative efficacy of natural and synthetic nitrification inhibitors for nitrogen release in alkaline calcareous soils. *Pak J Agric Science* 58(5), 1473-1482; DOI: 10.21162/PAKJAS/21. 58, 5(2021).
- 2 Ashraf et al., 2021. Soil microbial biomass and extracellular enzyme-mediated mineralization potentials of carbon and nitrogen under long-term fertilization (> 30 years) in a rice-rice cropping system. **Journal of Soils and Sediments** **21**: 3789-3800 <https://doi.org/10.1007/s11368-021-03048-0>.
- 3 Umar, W., M. K. Hameed, **Tariq Aziz**, et al. Synthesis, characterization, and application of ZnO nanoparticles for improved growth and Zn biofortification in maize, *Archives of Agronomy and Soil Science*, 67:9, 1164-1176, DOI: 10.1080/03650340.2020.1782893.
- 5 Qudsia et al., 2021. Variation in growth, physiology, yield, and quality of wheat under the application of different zinc coated formulations. *Appl. Sci.* 2021, 11(11), 4797; <https://doi.org/10.3390/app11114797>
- 6 Fatima, S., M. Sabir, T. Aziz et al., 2021. Comparison of fine and coarse rice varieties for nickel accumulation and growth response at different levels of nickel. *Clean - Soil, Air, Water* 2021, 49(6), 2000336 <https://doi.org/10.1002/clen.202000336>
- 8 Saleem, I., M.A. Maqsood, Z. Rehman, **T. Aziz**, I.A. Bhatti and S. Ali. 2021. Potassium ferrite nanoparticles on DAP to formulate slow release fertilizer with auxiliary nutrients *Ecotoxicology and Environmental Safety* (215): 1, 112148 <https://doi.org/10.1016/j.ecoenv.2021.112148>
- 9 Qudsia et al., 2021. Efficiency of various formulations of urea coated with bioaugmented (*Bacillus* sp.) ZnO to improve growth, yield and Zn contents of wheat grains. **Pol. J. Environ. Stud.** Vol. 30, No. 1 (2021), 1-9.
- 10 Abrar, M.M., H. Xu, T. Aziz et al., 2021. Carbon, nitrogen, and phosphorus stoichiometry mediate sensitivity of carbon stabilization mechanisms along with surface layers of a Mollisol after long-term fertilization in Northeast China. *Journal of Soils and Sediments* **21**, 705–723 <https://doi.org/10.1007/s11368-020-02825-7>

2020

- 1 Ashraf et al. 2020. Soil and microbial biomass stoichiometry regulate soil organic carbon and nitrogen mineralization in rice-wheat rotation subjected to long-term fertilization. **Journal of Soils and Sediments** 20, 3103–3113
- 2 Abrar, M., et al. Variations in profile distribution and protection mechanisms of organic carbon under long-term fertilization in a Chinese Mollisol. **Science Total Environment** 723: <https://doi.org/10.1016/j.scitotenv.2020.138181> (10.75)
- 3 Irfan, M., **Aziz, T.**, Maqsood, M.A. et al. Phosphorus (P) use efficiency in rice is linked to tissue-specific biomass and P allocation patterns. **Sci Reports (Nature)** 10, 4278 (2020). <https://doi.org/10.1038/s41598-020-61147-3> (4.99)
- 4 Sabir, M., M. Z. Rehman, **T. Aziz**, H.R. Ahmad, Saifullah & E. A. Waraich. Comparative residual effect of activated carbon and other organic amendments on immobilization and phytoavailability nickel and other metals to Egyptian Clover (*Trifolium alexandrinum*) in contaminated soil. **Int. J. of Phyto-remediation**. 22(7): 687-693 DOI: 10.1080/15226514.2019.1707165
- 6 Rashid, N., M.A. Maqsood, **T. Aziz**, et al. Characterizing lentil germplasm for zinc biofortification and high grain output. **J. Soil Sci. Plant Nutr.** 20, 336–1349 (2020)

2019

- 1 Saeed, M.T, M. A. Wahid, M. F. Saleem, M. Shahid, T. Aziz, M. W. Ali. Improving phosphorous uptake efficiency and quality of maize through optimization of basal application. Maydica electronic publication – 2019 (Short communication).
- 3 Raza S., Z. Chen, M. Ahmed, M. R. Afzal, **T. Aziz** & J. Zhou. Dicyandiamide application improved nitrogen use efficiency and decreased nitrogen losses in wheat-maize crop rotation in Loess Plateau. **Archives of Agronomy & Soil Science**. 65(4) 450-464. 10.1080/03650340.2018.1506584.

2018

- 3 Bilal, H.M., **T. Aziz**, M. A. Maqsood, M. Farooq and G. Yan. Categorization of Wheat Genotypes for Phosphorus Efficiency. **PLOS one** 13:10 <https://doi.org/10.1371/journal.pone.0205471>
- 4 Bilal, H.M., **T. Aziz**, M.A. Maqsood and M. Farooq. Grain phosphorus and phytate contents of wheat genotypes released during last 60 years and categorization of selected genotypes for phosphorus use efficiency. **Archives of Agronomy & Soil Science** 65(6): 727-740 (ID: 1521957 DOI:10.1080/03650340.2018.1521957).
- 5 Khan, W.u.D., **T. Aziz**, M.A. Maqsood, M. Farooq, Y. Abdullah, P.M.A. Ramzani and H.M. Bilal. 2018. Silicon nutrition mitigates salinity stress in maize by modulating ion accumulation, photosynthesis, and antioxidants. **Photosynthetica**, 56: 1047-1057

<https://link.springer.com/article/10.1007/s11099-018-0812-x>.

- 6 Raza, S., J. Zhou, **T. Aziz**, R. Afzal, M. Ahmed; S. Javaid, Z. Chen. Piling up reactive nitrogen and declining nitrogen use efficiency in Pakistan: a challenge not challenged (1961-2013)" **Environmental Research Letters** 13(3): 034012 <http://iopscience.iop.org/article/10.1088/1748-9326/aaa9c5/meta>.
- 2 Khan, W., **Tariq Aziz**, M. Imran, P.M.A. Ramzani and T.G. Reichenauer. 2017. Silicon: a beneficial nutrient for maize crop to enhance photochemical efficiency of photosystem II under salt stress. **Arch. Agron. Soil Science**. 63(5): 599-611

2015

- 2 Khan, W, M. Faheem, M. Y. Khan, S. Hussain, M. A. Maqsood and **Tariq Aziz**. 2015. Zinc requirement for optimum grain yield and zinc biofortification depends on phosphorus application to wheat cultivars. *Romanian Agricultural Research* 32. 1-9.
- 4 **Aziz, T.**, H. Lambers, D. Nicol and M. H. Ryan. 2015. Mechanisms for tolerance of very high tissue phosphorus concentrations in *Ptilotus polystachyus*. **Plant Cell and Environment** 38, 790–799. (Impact Factor: 6.97).
- 6 Aziz, H., M. Sabir, H.R. Ahmad, **T. Aziz**, M. Z. Rehman, K. R. Hakeem, M. Ozturk. 2015. Alleviating effect of calcium on nickel toxicity in rice. **Clean- Soil Air Water**. doi: [10.1002/clen.201400085] 43: 901-909
- 8 Maqsood, M.A., M. K. Khan, M. A. Naeem, S. Hussain, Tariq Aziz & J. Schoenau. 2015. High Sodium in Irrigation Water Caused B Toxicity at Low Soil Solution and Shoot B Concentration in Maize (*Zea mays* L.). **Journal of Plant Nutrition**, 38:5, 728-741, DOI: 10.1080/01904167.2014.939286

2014

- 3 **Aziz, T.**, P.M. Finnigen, H. Lambers and R. Jost. 2014. Organ specific phosphorus allocation patterns and transcript profiles linked to phosphorus efficiency in two contrasting wheat genotypes. **Plant Cell Environment**. 37: 943-960. (Impact Factor: 5.91).
- 4 Sabir, M., K. R. Hakeem, **Tariq Aziz**, M. Z. Rehman, I. Rashid, and M. Ozturk. 2014. High Ni levels in soil can modify growth performance and mineral status of wheat cultivars. *CLEAN - Soil Air Water* 10/2014 (**10.1002/clen.201300352**).
- 5 Ahmad. R., E.A. Waraich, M.Y. Ashraf, S. Ahmad and **Tariq Aziz**. 2014. Does nitrogen fertilization enhance drought tolerance in sunflower? A review. **Journal of Plant Nutrition** 37:942–963, 2014.
- 6 Sabir, M., M.M. Hanafi, M.Z. Rehman, Saifullah, H.R. Ahmad, K.R. Hakeem, W. Gandahi and **Tariq Aziz**. 2014. Comparison of low molecular weight organic acids and ethylene diamine tetra acetic acid to enhance phyto-extraction of heavy metals by maize (*Zea mays* L.) in contaminated Soil. **Communications in Soil Sci Plant Anal**. 45:42–52, 2014.

SCIENTIFIC CONFERENCES/SEMINARS/SYMPOSIA/WORKSHOPS

| YEAR | CONFERENCES/WORKSHOPS |
|------|--|
| 2025 | <i>Invited as expert/discussant on a Workshop “Climate Resilient and low carbon agriculture in Pakistan” organized by Asian Development Bank, on 11th February 2025, Flatties Hotel, Lahore, Pakistan.</i> |
| 2024 | <i>Invited talk on “Side Event “Sustainable Nitrogen Management; Collaborative solutions for Climate Change, Environment and Food Security” at COP29 on 20th November, 2024, Baku Azerbaijan.</i> |
| 2024 | <i>Invited talk on “Side event of HLPF 2024 on Making Nitrogen Visible; Reflection through SDGs under Review” Online, organized by CIWF, INI and UAF.... Organizer</i> |
| 2024 | <i>Invited Talk on “Draft South Asia Roadmap for Sustainable Nitrogen Management” in 6th Nitrogen Working Group Meeting of UNEP, 27 June 2024, Online</i> |
| 2024 | <i>Organized and talk at official side event “Making Nitrogen Visible through Sustainable Development Goals” at UNEA-6, Nairobi, Kenya, 26 February, 2024..... Organized</i> |
| 2023 | <i>Invited Talk on “Status of Reactive Nitrogen Pollution in South Asia” at a Symposium organized by Northwest A&F University, Yangling, Shaanxi, China, from 13 to 15 December, 2023</i> |
| 2023 | <i>Invited Talk on a side event “Grasping Nitrogen” along 5th Forum of Ministers and Environment Authorities of Asia Pacific, organized by MoE, Sri Lanka, SANH and SACEP, at Shangrilla Hotel, Sri Lanka on 3rd October, 2023.</i> |
| 2023 | <i>Invited Talk on 4th meeting of UNEP-Working Group on Nitrogen (Online), 29th September, 2023, on “South Asia Roadmap for Sustainable Nitrogen Management”.</i> |
| 2023 | <i>Organized and Plenary Talk on “Zero Draft of UNEA-6 Resolution on Sustainable Nitrogen Management and Roadmap for SNM” in collaboration with Ministry of Climate Change & Environmental Coordination, SANH, INI, and UAF on 22 September, 2023 at Marriot Hotel, Islamabad.</i> |
| 2023 | <i>Organized and Plenary Talk on “Roadmap to Sustainable Nitrogen Management” in Stakeholders Engagement Event organized by UAF in collaboration of SAU at Hotel MovenPick, Karachi, 18th July, 2023.</i> |
| 2023 | <i>Invited Talk in “International Workshop on Reactive Nitrogen Management” organized by Bangabandhu Sheikh Mujibur Rahman Agricultural University, 22 March 2023. (Remotely</i> |
| 2023 | <i>Invited Talk in “SANH (India) Stakeholders’ Workshop on Sustainable Nitrogen Management -2023” August 25-26, 2023” Kalinga Institute of Industrial Technology, Bhubaneswar, India (Remotely)</i> |
| 2023 | <i>Invited Talk at Ist International Conference on Soil Pollution and remediation 15-16 March,</i> |

- 2023 at FCCU, Lahore “Food Security and Environment Degradation; Nitrogen on the Driver’s seat”.
- 2023 2nd International Conference “New Trends in Biological Sciences” University of Okara, Okara January 16-17, 2023.
- 2022 21st Nitrogen Workshop from 24th to 26th October 2022 at Madrid, Spain (Joined remotely and presented an oral talk)
- 2022 Soil Science Society of Pakistan Congress, University of Agriculture, Faisalabad; Presented invited speaker: “Why care about nitrogen”
- 2022 NATIONAL CONFERENCE ON SOIL DEGRADATION: AN ALARMING THREAT TO FOOD SECURITY AND ENVIRONMENT Organized by Department of Soil Science, Faculty of Agricultural Sciences & Technology, Bahauddin Zakariya University, Multan, Pakistan, 3-4 March 2022, Invited Talk on “Evaluation of natural and synthetic nitrification inhibitors on wheat yield and nitrogen use efficiency”.
- 2021 Sustainable N management for food security, organized by UAF, FFC, SANH, PAS, International Webinar on 8th December, 2021. Invited Speaker “Pakistan Nitrogen Assessment”.
- 2021 International Symposium on Plateau Ecological Environment Protection and High-quality Development of the Yellow River Basin. October 30, 2021, (Webinar) organized by College of Natural Resources and Environment, Northwest A&F University, Yangling, Shaanxi, China. Presented an oral talk “Sustainable Nitrogen Management for Food Security and Environment”
- 2021 Sustainable N management for ecosystem restoration, International World Environment Day Webinar 4th June, UNEP, SANH, UAF. Organizer and Speaker.
- 2021 Food security and environmental concerns of reactive nitrogen; Pakistan’s perspective. 13th September 2021, ICESD, SDSC, GC University, Lahore, Oral Presentation and Session Chair
- 2020 C3 Demo Meeting, INA (INMS) Online meeting 23.11.2020, UK.
- 2020 INA Book Meeting Online: 30 Nov to 2 December and 8 December to 10 December
- 2020 Nitrogen Challenges in Agri-Food Systems: Halve Nitrogen Waste by 2030, Organized by FAO (Online Webinar) December 07, 2020
- 2020 Covid 19, Plenary Meeting, 28th November, 2020 (ONLINE) SANH Project Work Package Meetings (Online) Covid-19 Impact. SANH 5-6, 8-10 November 2020
- 2020 INMS Plenary Meeting (International) ONLINE MEETING with more than 100 participants
- 2019 UN Nitrogen Awareness Campaign, Sri Lanka
- 2019 Plenary Meeting INMS-4 (International Nitrogen Mangement System), 28 April to 03 May, 2019, UN Environment Base, Nairobi, Kenya
- 2019 Inception Meeting of South Asia Nitrogen Hub at Khatmandu, Nepal, 24 to 28 February,

- 2019
- 2019 *Concluding Workshop of a German Project “Assessing the biomass potential for ensuring the soil health and food security in Pakistan” 17-20 Feb 2019.*
- 2019 *Research Visit of ITT, University of Cologne, Germany (January 10 to January 25, 2019)*
- 2018 *INMS-3, International Nitrogen Management System-3, University of Edinburgh, UK, 21-25 April, 2018*
- 2017 *Kick-off meeting of a German funded project at IATT, University of Cologne, Germany, December 14 to 18, 2017*
- 2017 *XVIII International Plant Nutrition Colloquium 19-24 August 2017 • Copenhagen | Denmark*
- 2016 *IUFRO Regional Congress on Asia and Oceania 2016, 24-27 October, Beijing (as invited speaker) China National Convention Centre, Beijing, China.*
- 2016 *7th International Crop Science Congress organized by Institute of Crop Science, Chinese Academy of Agricultural Sciences, August 14-19, 2016, International Convention Centre, Beijing, China (as Speaker).*
- 2015 *Workshop on Applications of Biotechnology for Wheat Improvement organized by National Institute of Biotechnology and Genetic Engineering, (NIBGE), Faisalabad.*