

Dr. AASMA TUFAIL Ph.D Botany (UAF)

☎+923085638132, ✉ aasma.tufail@ue.edu.pk

Office: Room #07, New Academic Block, University of Education, Lahore



CAREER OBJECTIVES

To contribute my services in a reputable organization bearing a healthy environment where I can utilize skills, energy and educational background and to accomplish challenge with complete dedication, sincerity and goal oriented attitude.

Academic Qualification

Certificate/Degree	Major Subjects	Institution/Board	Passing Year	Marks / CGPA		Percentage/Division
				Obtained	Total	
Ph.D	Botany	University of Agriculture, Faisalabad	2011-2016	3.53	4.00	1 st
Post-graduation/M.Phil	Botany	University of Agriculture, Faisalabad	2010	3.53	4.00	74.58%/ 1 st
Masters/M.Sc	Botany	University of Agriculture, Faisalabad	2007	3.56	4.00	76.35%/1 st
Graduation/B.Sc	Botany, Zoology, Chemistry	Punjab University Lahore	2005	457	800	57.1%/2 nd
Intermediate/HSSC	Biology, Physics, Chemistry	BISE Gujranwala	2001	666	1100	61%/1 st
Matriculation/SSC	Biology, Physics, Chemistry	BISE Gujranwala	1999	655	850	77.1%/1 st
Other	B.Ed (General science, Biology)	Allama Iqbal Open University, Islamabad	2010	625	900	69%/1 st

Research Work:

Ph.D. Thesis Title: “Ecotypic adaptations in Bermuda grass [*Cynodon dactylon* (L.) Pers.] For salt stress tolerance” under the supervision of Dr. Farooq Ahmad and Prof. Dr. Mansoor Hameed, Dept. Of Botany, University of Agriculture, Faisalabad by the support of Indigenous PhD Fellowships for 5000 Scholars, HEC (Phase-II)

International Research Support Initiative Programmed (IRSIP) under supervision of Prof. Dr. Donald L. Smith in McGill University, McDonald Campus, Montreal, Canada as worked on related to “aspects of plant-microbe interactions and molecular signaling between microbes and the plants they associate with main project has involved the stimulation of crop growth through application of microbe-to-plant signals under normal and saline environment”.

M.Phil Thesis Title: “Study of Salicylic acid induced growth in two maize (*Zea mays* L.) Genotypes under salt stress” under the supervision of Dr. Muhammad Arfan Dept. Of Botany, University of Agriculture, Faisalabad.

M.Sc. Thesis Title: “Distribution and comparative anatomy of family Cyperaceae in the Faisalabad region” under the supervision of Prof. Dr. Mansoor Hameed, Dept. of Botany, University of Agriculture, Faisalabad.

WORK EXPERIENCE

Organization	Position held/major duties	Duration					
		From			To		
		D	M	Y	D	M	Y
University of Education, Division of Science & Technology, Lahore	Tenured Associate Professor (TTS)	17	04	2024	To date		
University of Education, Division of Science & Technology, Lahore	Assistant Professor (TTS)	08	09	2017	16	04	2024
University of Education, Division of Science & Technology, Lahore	Lecture (BS-18)	16	11	2016	07	09	2017
University of Agriculture, Faisalabad	Teaching Assistant	08	03	2014	18	09	2014
Govt. Postgraduate College For Women, Satellite Town, Gujranwala Gujranwala	College Teaching Interns (C.T.I) BPS-17	1	11	2010	07	10	2011
Saleh Education School System, B14-B, Satellite Town, Gujranwala	Science Teacher	08	01	2008	06	09	2008
Total		Approximately 10 years					

PUBLICATIONS

Published Research Articles

1. Ismail, A., **Tufail, A.**, Yousaf, M., Younas, A., Attia, K. A., Hafez, Y. M., ... & Saeed-Ur-Rehman, H. (2026). Effect of Different Fruit Peel Extracts to Evaluate the Growth, Physiological, and Anatomical Characters of Two Bitter Gourd (*Momordica charantia* L.) Varieties. *Polish Journal of Environmental Studies*, 35(1), 185-196.
2. Khan, M., Azeem, M., Ijaz, H., Arshad, W., **Tufail, A.**, & Jabeen, S. (2026). Molecular phylogeny and morphological characterization revealed *Candolleomyces mianwaliensis* Psathyrellaceae, Agaricales, a new species from Punjab, Pakistan. *Nordic Journal of Botany*, 2026(2), e04858.
3. Yousaf, M., **Tufail, A.**, Attia, K. A., Ashraf, U., Ahsan, M., Younas, A., ... & Mohammed, A. A. (2025). Exogenous gamma amino butyric acid (GABA) enhanced salinity tolerance in wheat by modulating morphological and anatomical traits. *Scientific Reports*, 15(1), 36998.
4. Ahsan, M., **Tufail, A.**, Jamal, A., Al-Yasi, H., Radicetti, E., Raza, M. A., ... & Valipour, M. (2025) Nitric oxide regulates water status, antioxidant enzymes, nutritional balance, and growth of gazania under drought stress. *Functional Plant Biology*. VOLUME 52, FP25029. <https://doi.org/10.1071/FP25092>.
5. Muhammad Shakeel, **Aasma Tufail**, Madiha Rashid,... & Sarah Owdah Alomrani (2024). Effect of Rhizospheric Bacteria On Growth, Physiological Attributes And Melatonin Contents of *Trigonella Foenum-Graecum* L. *Scientia Horticulturae*. 323 (2024) 112552.
6. **Aasma Tufail**, Mansoor hameed, (2023). Modification in Family Cyperaceae for Abiotic Stress Tolerance. *Journal Plantarum*, Vol. 5 No. SI (2023): Recent Approaches in Plant Sciences 2023.
7. Muhammad Iftikhar, Madiha Rashid, Zubaida Yousaf, **Aasma Tufail**,... & Abdul Hannan (2023). Taxonomic Evaluation of *Spinacia oleracea* L. Accessions by Morphological and Anatomical Markers. *J. Plant Environ*. 05 (02) 2023. 135-150.
8. **Aasma Tufail**, Mansoor Hameed , Muhammad Ahsan , Umme Habibah Siddiqua , Shumaila Ijaz, Aqsa Perveen (2023). Modification in Family Cyperaceae for Abiotic Stress Tolerance. *J. Plantarum.*, 5(SI): 103-122, 27-12-2023

9. Siddiqua, U. H., Ali, S., **Tufail, A.**, Gatasheh, M. K., Riaz, L., & Yasir, M. W. (2023). Relationship between reactive group chemistry and printing properties of heterofunctional reactive dyes via screen printing. *Scientific Reports*, 13(1), 7259.
10. **Aasma Tufail**, Farooq Ahmad, Mansoor Hameed, Muhammad Ahsan, Umme Habiba Siddiqua, Madiha Rashid, Anis Ali Shah. (2023). Structural modifications in Bermuda grass [*Cynodon dactylon* (L.) Pers.] ecotypes for adaptation to environmental heterogeneity. *Frontiers in Plant Science*, 13, 1084706.
11. Noreen Khalid, Ali Noman, Atia Nazir, **Aasma Tufail**..., & Muhammad Aqeel. (2023). *Nerium oleander* could be used for sustainable management of traffic-borne elemental-enriched roadside soils. *Environmental Science and Pollution Research*. 30(14), 40551-40562.
12. Ahsan, M., Zulfiqar, H., Farooq, M. A., Ali, S., **Tufail, A.**, Kanwal, S., ... & Radicetti, E. (2022). Strigolactone (GR24) Application positively regulates photosynthetic attributes, stress-related metabolites and antioxidant enzymatic activities of ornamental sunflower (*Helianthus annuus* cv. Vincent's Choice) under salinity stress. *Agriculture*, 13(1), 50.
13. Rameesha Tahir, Muhammad Ahsan, Muhammad Ammar Raza, Javaria Sherani³, **Aasma Tufail**..., et al., (2022). Silicon mediated drought stress in vegetative and reproductive attributes of gladiolus (*Gladiolus grandiflorus* var. *Advance Red*) under agro-climatic conditions of Cholistan Desert. [SYLWAN., 166(6)]. ISI Indexed.
14. Ahsan, M., Nafees, M., Amin, M., Nawaz, F., **Tufail, A.**, Sardar, H., ... & Elansary, H. O. (2022). Nutrients Uptake and Accumulation in Plant Parts of Fragrant Rosa Species Irrigated with Treated and Untreated Wastewater. *Plants*, 11(9), 1260.
15. Khilji, S. A., Aqeel, M., Maqsood, M. F., Khalid, N., **Tufail, A.**, Sajid, Z. A., ... & Noman, A. (2021). *Hemarthria compressa*—*Aspergillus niger*—*Trichoderma pseudokoningii* mediated trilateral perspective for bioremediation and detoxification of industrial paper sludge. *Sustainability*, 13(21), 12266.
16. Muhammad Ahsan, Adnan Younis, Muhammad, Nafees, **Aasma Tufail**, ...& Hira Zulfiqar. (2021). Marginal quality water arbitrated essential oil contents in metal hoarded Flower petals of scented roses. 2021. *Ecotoxicology and Environmental Safety*. 226, 112853.

17. Muhammad Aqeel, Noreen Khalid, **Aasma Tufail**,...& Ali Noman. (2021). Elucidating the distinct interactive impact of cadmium and nickel on growth, photosynthesis, metal-homeostasis, and yield responses of mung bean (*Vigna radiata* L.) varieties. *Environmental Science and Pollution Research*, 28, 27376-27390.
18. S. Muzaffar, M. Abbas, U.H. Siddiqua, M. Arshad, **A. Tufail**,...& M. Iqbal. (2021). Enhanced mechanical, UV protection and antimicrobial properties of cotton fabric employing nanochitosan and polyurethane based finishing. *Journal of Materials Research and Technology*. 11: 946-956.
19. **Aasma Tufail**, Muhammad Aqeel Aqeel, Noreen Khalid,...& Muhammad Mohamed Hashem. (2020). Salt toxicity in a natural habitat induces structural and functional modifications and modulate metabolism in Bermuda grass (*Cynodon dactylon* [L.] Pers.). *Applied Ecology and Environmental Research*, 2020 18(5):6569-6588.
20. Noreen Khalid, Ali Noman, Atifa Masood, **Aasma Tufail**,...& Muhammad Aqeel. (2020). Air pollution on highways and motorways perturbs carbon and nitrogen levels in roadside ecosystems. *Chemistry and Ecology*. 2020, 36,(9) 868–880.
21. Muhammad Ahsan, Khansa Saleem, Hira Zulfiqar, Muhammad Ammar Raza, Muhammad Rashid Shaheen, Waqas Ashraf, Muhammad Raheel, **Aasma Tufail**, Ali Raza Irfan, Laraib Ihsan, Zeeshan Ahmad. (2020). Salicylic acid moderated drought stress by managing plant characteristics in pansy (*Viola tricolor*) under cholistan desert conditions. *SYLWAN*, 164(5).
22. Noreen Khalid, Ali Noman, Muhammad Aqeel, Atifa Masood, **Aasma Tufail**. (2019). Phytoremediation potential of *Xanthium strumarium* for heavy metals contaminated soils at roadsides *International Journal of Environmental Science and Technology*. 16: 2091-2100
23. Muhammad Ahsan, Adnan Younis, Muhammad Jafar Jaskani, Usman Tariq, Muhammad Rashid Shaheen, **Aasma Tufail**, Javaria Sherani, Fahim Nawaz. (2019) Anatomical changes in Stem of Scented Rosa spp. in Response to Heavy Metal Accumulation under Wastewater Treatment. *International Journal of Agriculture and Biology*, 2019:1159-1165

24. Muhammad Ahsan, Adnan Younis, Muhammad Jafar Jaskani, **Aasma Tufail**, Atif Riaz, Timothy Schwinghamer, Usman Tariq and Fahim Nawaz. (2018) Heavy metal accumulation imparts structural differences in fragrant Rosa species irrigated with marginal quality water. *Ecotoxicology and Environmental Safety* 159 240-248.
25. Muhammad Ahsan, Adnan Younis, Atif Riaz, Muhammad Jafar Jaskani, Muhammad Qasim, Mansoor Hameed, **Aasma Tufail**, Muhammad Nafees, Haider Abbas and Usman Tariq. (2018). Treated and Untreated Wastewater Imparts Morphological Changes to Scented Rosa Species In Peri-Urban Area. *Pak. J. Agri. Sci.*, 55(1) 111-117;
26. **Aasma Tufail**, Farooq Ahmad, Mansoor Hameed, Rashid Ahmad. (2017) Growth performance and stomatal behavior in relation to ecotypic adaptations in *cynodon dactylon* (L.) Pers. *Pakistan Journal of Botany*. vol. 49 (4) 1395-1403,
27. Ali Noman, Hina Kanwal, Noreen Khalid, Tayyaba Sanaullah, **Aasma Tufail**, Atifa Masood, Sabeeh-ur-Rasool Sabir, Muhammad Aqeel and Shuilin He. (2017). Perspective Research Progress in Cold Responses of *Capsella bursa-pastoris*. *Frontiers in Plant Science*. 8: 2017, 1388
28. Muhammad Ahsan, Adnan Younis, Muhammad Jafar Jaskani, Muhammad Asif Haneef, **Aasma Tufail**, Usman. Tariq, Umme Habibah. Siddiqua, S. Aziz, Rabia. Gull. (2017) Heavy Metal Profile of Four Fragrant and Oil Bearing *Rosa* Species Cultivated Under Treated and Untreated Wastewater in Peri-Urban Area *Oxidation Communications* 40, No 4, 1404–1418.
29. Ijaz Ahmad, Mumtaz Hussain, Tanveer Hussain, Abdul Ghani, **Aasma Tufail**,...& Humayun Bashir. (2016). Evaluation of maize (*zea mays* l.) Cultivars at grain filling stage for drought resistance based on morphological, physiological and growth attributes. *Int. J. Agric. Appl. Sci.* 8 (2)
30. **Aasma Tufail**, Muhammad Arfan, Ali Raza Gurmani, Abdullah Khan and Asghari Bano. 2013. Salicylic acid induced salinity tolerance in maize (*Zea mays*). *Pak. J. Bot.*, 45(s1): 75-82.
31. Mansoor hameed, Tahira Nawaz, Muhammad Ashraf, **Aasma Tufail**, Hina Kanwal, M. Sajid Aqeel Ahmad and Iftikhar Ahmad. (2012). Leaf anatomical adaptations of some halophytic and xerophytic Sedges of the Punjab. *Pak. J. Bot.*, 44: 159-164.

PUBLISHED REVIEW ARTICLE

1. Ijaz, S., Iqbal, J., Abbasi, B. A., **Tufail, A.**, Yaseen, T., Uddin, S., ... & Sharifi-Rad, J. (2023). Current stage of preclinical and clinical development of guggul sterone in cancers: Challenges and promises. *Cell Biology International*.

PUBLISHED BOOK CHAPTER

1. Younas, A., Riaz, N., Rashid, M., Fiaz, S., **Tufail, A.**, Noreen, Z., Aslam, M., Khan, M.U. and Tabassum, M. (2025). Modification in Conventional Methods and Modern Plant Breeding Techniques to Enhance Genetic Gain for Future Food Security. In *Crop Biofortification* (eds A.N. Shah, S. Faiz, M. Aslam, J. Iqbal and A. Qayyum). <https://doi.org/10.1002/9781394273270.ch22>
2. Younas, A., Fiaz, S., Younis, R. M. W., Riaz, N., Rashid, **M.**, **Tufail, A.**, ... & Tariq, N. (2024). Applicability of Nanomaterials in Agriculture. In *Revolutionizing Agriculture: A Comprehensive Exploration of Agri-Nanotechnology* (pp. 17-56). Cham: Springer Nature Switzerland.
3. Maleeha Ishaqa , Jawaria Khalida , Zonaira Qaisera , Wajiha Sarfraza , Ujala Ejazb , Nayab Naema , Atifa Masoodc , **Aasma Tufaild** , Komal Arshada , Shanza Zaka and Noreen Khalida. (2024). Nickel contamination, toxicity, tolerance, and remediation approaches in terrestrial biota. soil environment. Elsevier.
4. Younas, A., Riaz, N., Rashid, M., **Tufail, A.**, Hyder, S., & Noreen, Z. (2024). CRISPR/Cas System for Achieving Abiotic Stress Tolerance. *OMICs-based Techniques for Global Food Security*, 213-231.
5. Ijaz, S., Iqbal, J., Abbasi, B. **A.**, **Tufail, A.**, Ullah, Z., Yaseen, T., ... & Iqbal, R. (2023). Heavy metal–polluted arable land and its consequences: a global scenario. In *Biochar-assisted Remediation of Contaminated Soils Under Changing Climate* (pp. 71-99). Elsevier.
6. Ijaz, S., Iqbal, J., Abbasi, B. **A.**, **Tufail, A.**, Ullah, Z., Sharifi-Rad, J., ... & Uddin, S. (2023). Biofortification: Lessons from the Past and Strategies for Future Food Security. In *Legumes Biofortification* (pp. 521-545). Cham: Springer International Publishing.

PUBLISHED ABSTRACTS:

1. **Aasma Tufail**, Farooq Ahmad, Mansoor Hameed, Muhammad Ahsan, Timothy Schwinghamer. Structural and functional aspects of photosynthesis in different ecotypes

- of Bermuda grass (*Cynodon dactylon* [L.] Pers.) under salt stress. Accepted for poster presentation in IPC **2017** 14TH International phytotechnologies conference, Phytotechnologies, new sustainable solutions for environmental challenges. September 25-29, 2017, Montreal Canada.
2. **Aasma Tufail**, Farooq Ahmad, Mansoor Hameed and Muhammad Ahsan. Anatomical Modifications in Ecotypes of Bermuda Grass [*Cynodon dactylon* (L.) Pers.] In Different Zones of Biodiversity of Punjab-Pakistan. 1st International Conference on Climate Change and Biodiversity. May 02-04, **2017**, The Islamia University of Bahawalpur.
 3. Muhammad Ahsan, Shazia Anjum, Adnan Younis, Muhammad Jafar Jaskani, Atif Riaz, **Aasma Tufail**, Usman Tariq and Raheel Atif Hameed. Physiological and leaf structural changes in different fragrant *Rosa* species irrigated under treated and untreated wastewater in peri-urban area. 1st International Conference on Climate Change and Biodiversity. May 02-04, 2017, The Islamia University of Bahawalpur.
 4. Muhammad Ahsan, Shazia Anjum, Adnan Younis, Muhammad Jafar Jaskani, Atif Riaz, **Aasma Tufail** and Usman Tariq. Plant reproductive characteristics affected by heavy metal accumulation in fragrant roses when irrigated with municipal wastewaters. 1st International Conference on Climate Change and Biodiversity. May 02-04, 2017, The Islamia University of Bahawalpur.
 5. Muhammad Ahsan, Adnan Younis, Atif Riaz, Shazia Anjum, **Aasma Tufail** and Usman Tariq. Heavy metal contents in fragrant *Rosa* species irrigated under treated and untreated wastewater in peri-urban area. National Conference on Challenges and Opportunities to Boost Agriculture in Changing Climate. March 29-30, **2017**. College of Agriculture, BZU, Bahadur Sub-Campus Layyah.
 6. Muhammad Ahsan, Adnan Younis, Atif Riaz, Shazia Anjum, Usman Tariq and **Aasma Tufail**. Comparative study of treated and untreated wastewater on essential oil contents of four fragrant *Rosa* species. National Conference on Challenges and Opportunities to Boost Agriculture in Changing Climate. **March 29-30, 2017**. College of Agriculture, BZU, Bahadur Sub-Campus Layyah.
 7. Muhammad Ahsan, Adnan Younis, Atif Riaz, Shazia Anjum, **Aasma Tufail** and Usman Tariq. Heavy metal contents in fragrant *Rosa* species irrigated under treated and untreated wastewater in peri-urban area. National conference “Challenges and opportunities to boost agriculture in changing climate” held on **March 29-30, 2017** at College of Agriculture, Bahauddin Zakariya University, Bahadur sub-campus, Layyah, Punjab, Pakistan.
 8. Muhammad Ahsan, Adnan Younis, Atif Riaz, Shazia Anjum, Usman Tariq and **Aasma Tufail**. Comparative study of treated and untreated wastewater on essential oil contents

- of four fragrant *Rosa* species National conference “Challenges and opportunities to boost agriculture in changing climate” held on **March 29-30, 2017** at College of Agriculture, Bahauddin Zakariya University, Bahadur sub-campus, Layyah, Punjab, Pakistan.
9. Naheed Bano, Muhammad Afzal, Umme Habibah Siddiqua and **Aasma Tufail**. Biochemical assessment and aquatic food security relation with fisheries, food safety and human health. 27th National and 15th International Chemistry conference held on 22-25 August, **2016** at the University of Malakand, Chakdara, Dir (Lower), Khyber Pakhtunkhwa, Pakistan.
 10. **Aasma Tufail**, Mansoor Hameed, Farooq Ahmad, Iftikhar Ahmad and Rabia Gull. 2016. Structural modifications in some sedges for phytoremediation of metal-polluted aquatic wet lands. 2016. 16th International congress of soil science (ICSS-2016) held on **15-17 March, 2016** at PMAS-Arid agriculture university, Rawalpindi.
 11. Mansoor Hameed, Noreen Akhtar, Farooq Ahmad, **Aasma Tufail**, Sana Fatima, Mehwish Naseer, Aneela Zahoor and Sajjid Aqeel Ahmad. **2016**. Adaptive responses of *Typha domingensis* Pers. ecotypes in saline and metal polluted wetlands. 16th International congress of soil Science (ICSS-2016) held on **15-17 March, 2016** at PMAS-Arid agriculture university, Rawalpindi.
 12. Ali Raza Gurmani, Sami Ullah Khan, Abid Farid, **Aasma Tufail**, Fazli Mabood and Donal L. Smith. **2016**. Inoculation of Soyabean seeds with *Bradyrhizobium japonicum* strains accelerates nitrogen fixation and plant growth of soybean at optimal and suboptimal root zone temperature. 16th International congress of soil Science (ICSS-2016) held on **15-17 March, 2016** at PMAS-Arid agriculture university, Rawalpindi.

PROFESSIONAL EXPERIENCE/ AWARDS

TRAINING AND WORKSHOP PARTICIPATION

1. Nominated for the two-day workshop on “**Empowering Educators: Inclusive STEAM Tools for Transformative Pedagogy**” organized by the University of the Education Lahore & UK- Pakistan Science and Innovative Global Network on **May 24-25, 2025**.
2. Participated in the two-day workshop on “**Nanotech Essentials**” organized by the Department of Plant Pathology at the University of the Punjab on **October 21-22, 2024**.
3. Attended online International training Programme on “**Innovation in Water Resource Management and Its Challenges**”, Venue: Rajiv Gandhi National Ground Water Training & Research Institute (RGNGWTRI), Raipur, Chhattisgarh, India on **22-25 July 2024**.

4. Attended online International training Programme on “**AARDO-MARDI Joint Online Training Programme on Agricultural Nanotechnology: Catalyzing Food Security and Sustainability**”, Mardi on **01-04 July 2024**.
5. Attended online International training Programme on “**Advancements in Agriculture and Food Engineering in India**” Indian institute of Technology Kharagpur, India on **10-13 June 2024**.
6. Attended online International training Programme on "**Agri Innovation and Technology Transfer for Sustainable development**" at School of agriculture, University of Ghana, IITM, Chennai India, on **26-29 July 2022**.
7. Attended online International training Programme on "**Adaptation of optimized water Resource management for sustainable development**" at, IAV Hassan II Nelga and culture MOROCO, on **18-21 July 2022**.
8. Two days work shop on "Algal Collection Techniques and Their Economic Uses" organized by Institute of Botany, University of Punjab Lahore. Held on 18-19 May 2022.
9. Attended online International training Programme on "**Role of Innovative Primary Health Care (PHC) for Sustainable development**" at IITM, Chennai India, on **20-25 March 2022**.
10. AARDO - IITM E-training Programme on "The Role of Innovative Primary Health Care for Sustainable Development" **21 February - 03 March 2022**.
11. Attended online seminar on “**Development of novel multifunctional bio char-based adsorbent for the removal of typical environmental pollutants from waste water**” Organized by Department of Botany, university of Lahore, Sargodha Campus on **January 11, 2021**.
12. Attended online international training programme on "**Food and Nutrition Security In A Post Pandemic World**" Venue: CTARA Indian Institute of Technology Bombay on **14-23 September 2021**.
13. Participated AARDO-AHKNCRD Collaborative International Online Training Programme on “**Climate Change – Implications and Adaptation**”, **May 31-04 June, 2021**. Organizing by the Akhtar Hameed Khan National Centre for Rural Development (AHKNCRD), Government of Pakistan, Islamabad, an Executive Department of Establishment Division, Islamabad, is an apex capacity building institution of the country.
14. Training workshop of program team members regarding self-assessment **2018-19 on 27 Feb 2019** at UE Township Lahore.

15. Training on **promoting social hormone and critical consciousness (Jan 2019)** AT Lahore.
16. Accepted as participant in International training workshop on **“Drip Irrigation and Fertigation”** held on 25-29 September 2017. Diyarbakir, Turkey.
17. Awarded certificate on successfully completed 20th Post graduate training course on **“Safety measures and application of radiation & isotope in agriculture, health and industry” held on 04-08 April, 2016** at nuclear institute for agriculture and biology (NIAB) Faisalabad.
18. Awarded certificate on Attended work shop on **“Capacity building in seed technology”** by Pakistan seed Academy held on **07 June, 2014** at University of Agriculture, Faisalabad Pakistan.
19. Awarded certificate on Attended 2nd **“International Workshop on Biochar, Agronomic, Socio-Economic and Policy perspectives on Biochar and C-Market”** held on **May 12, 2014** at University of Agriculture, Faisalabad- Pakistan.

CONFERENCES/SEMINAR PARTICIPTION

1. Attended as oral presenter in 2nd International conference on **“Trends and Research in Chemistry” (TRIC-2023)**. Department of Chemistry, University of Education, Lahore, Pakistan. May 16-18, 2023.
2. Attended as oral presenter in 2nd International conference on **“Recent Approaches in Plant Sciences” (RAPS-2023)**. Department of Botany, University of Education, Lahore, Pakistan. May 04-05, 2023.
3. Attended as oral presenter in International on **“Recent Trends in Natural Sciences” (RTNS-2022)**. Organized by Department of Natural Sciences, University of Education, Lahore, Jauharabad campus, Pakistan. **June 01-02, 2022**
4. Attended and organized, **1st International Conference (Online) “Recent Approaches in Plant Sciences” (RAPS-2022)**. Department of Botany, University of Education, Lahore, Pakistan. **March 30-31, 2022**
5. Attended as oral presenter in **“International Online conference on "Dynamic strategies in Plant sciences for Crop Sustainability and Food Security" held on May 26-27, 2021** through zoom link at Department of Botany, Government College Women University, and Faisalabad, Pakistan.
6. Attended as oral presenter in International Horticultural e-Conference 2021 **“Ecological Adaptive Features in Few Members of Sedges from Various Regions of Punjab held on 22-23 February 2021.**

7. Attended online “**International seminar on "Fate of GM Food derived DNA in the Human Body"**”, Sargodha Pakistan on June **19, 2020**.
8. Attended webinar on “**Writing Research Papers and Submissions by Prof. Lance Fung, Malaysia**” on June **3, 2020**.
9. Attended as oral presenter “**International Conference of Smart Plantation, an ultimate solution to climate change, ICSP2020**” at Lahore College for Women University, Lahore, Pakistan as oral presenter on March, **2-4, 2020**.
10. Attended as oral presenter in “**International Horticultural Conference 2020 (IHC2020), SA Garden and IAGS**” at University of the Punjab, Lahore, Pakistan as oral presenter on February, **26-28, 2020**.
11. Participated as member of **2nd International Conference on Quality Assurance in Higher Education** Organized by Pakistan Network of Quality Assurance in Higher Education (PNQAHE) at University of Education, Lahore, Pakistan (**23-25 April 2019**).
12. Participated in one day seminar on “Science communication and Social media” on April **26, 2018** at University of Education, Lahore, Pakistan organized by Department of Botany.
13. Participated and presented research paper on **1st International Conference on Climate Change and Biodiversity. May 02-04, 2017**. The Islamia University of Bahawalpur.
14. Participated in 5th International conference on Education as faculty member of Division of science and Technology, UOE Lahore on “**Building Bridge between Mathematics, Science & Technology and teacher education**”. Held on **24-26, March 2017** Organized by University of Education.
15. Attended “**Spring tree Planting Campaign 2017**” as faculty member held on **22-02-2017** Organized by University of Education, Township Lahore.
16. Attended seminar as participant on “**Producing effective graduates: A challenge for quality Assurance in higher education**”. Held on **28-12-2016** Organized by Virtual university of Pakistan and University of Education.
17. Attended “**National grapes harvest festival Pakistan**”, **2016** Organized by Agri-Tourism development corporation of Pakistan. Held on **3rd to 5th June, 2016** at Rana Abdul Quayom grape farm, Near Shahkot to Sangla Hill Road, Faisalabad.
18. Participated and Awarded on poster presentation in the “1st stake holder’s interactive one day workshop on the topic of “**Prospects of new crops in Pakistan**” held on **09 April, 2016** at University of Agriculture, Faisalabad- Pakistan.
19. Attended “**National Agri-tourism festival Pakistan**” Organized by Agri-Tourism development corporation of Pakistan. Held on **18th December 2015** at Amir town, East canal road, Faisalabad.

20. Awarded certificate on Attended 1st International conference of Botany “**Major environmental constrains to plant assessment and reclamation**” held on **28-30 March, 2016** at Government college university, Faisalabad
21. Awarded certificate on Participated in 16th International congress of soil Science (ICSS-2016) “**Healthy soils for food security by soil science society of Pakistan**”. Held on **15-17 March, 2016** at PMAS-Arid agriculture university, Rawalpindi.
22. Awarded certificate on Participated as team member in “**National Agri-tourism Festival**” organized by Agri-tourism Development Corporation of Pakistan held on **Dec. 18, 2015**.
23. Awarded certificate on Attended International conference of Biochemical and Chemical Sciences (ICBCS-2014) on “**Go greener for sustainable economy**”. Held on **24-26 February, 2014** at University of Agriculture, Faisalabad, Pakistan
24. Awarded certificate on Attended First National seminar of Pakistan Allelopathy society “**Allelopathy research in Pakistan: Experiences and opportunities**” held on **12th December, 2013** at University of Agriculture, Faisalabad.
25. Awarded certificate on Participated “**International Conference on Date palm present status and Future Prospectus**” held on September **02-03, 2013** at Islamia University Bahawalpur, Pakistan.
26. Awarded certificate on Participated 1st International Conference on “**Prospects and opportunities for agricultural development in Pakistan**” held on **June 25-27, 2013** at University of Haripur, Khyber Pakhtunkhwa, Pakistan.
27. Awarded certificate on Attended International Symposium “**Strategies for conservation of Endangered Ecosystem**” held on **April 16-18, 2012** at University of Agriculture, Faisalabad, Pakistan.
28. Awarded certificate on Attended “**International Conference of Plant scientists 10th National meeting of plant scientists**”, held on **April 21-24, 2008** at University of Agriculture, Faisalabad, Pakistan.
29. Awarded certificate on Attended International Symposium on “**Strategies for crop improvement against Abiotic Stresses**” held on **Sep 18-20, 2007** at University of Agriculture, Faisalabad, Pakistan.

ORGANIZER

1. Organized “**Pink Ribbon Youth awareness Programe-2025**” Held on **Oct 10, 2025** at University of Education, Lahore, Pakistan.

2. Organized International Symposium on **“Role of Biotechnology in agriculture Practices”**. Department of Botany, University of Education, Lahore, Pakistan. **Oct 02, 2025.**
3. Organized **“Pink Ribbon Youth awareness Programe-2024”** Held on **Oct 29, 2024** at University of Education, Lahore, Pakistan.
4. Organized 2nd International conference on **“Recent Approaches in Plant Sciences” (RAPS-2023)**. Department of Botany, University of Education, Lahore, Pakistan. **May 04-05, 2023.**
5. Organized one day hands on training workshop on **“Roof Top Gardening”**, Department of Botany, Division of Science & Technology University of Education, Lahore on **Jan 10, 2023.**
6. Organized 1st International conference on **“Recent Approaches in Plant Sciences” (RAPS-2022)**. Department of Botany, University of Education, Lahore, Pakistan. **March 30-31, 2022.**
7. Organized one day International Webinar on **“Ecosystem Restoration”** Department of Botany, Division of Science & Technology University of Education, Lahore, on **June 05, 2021.**
8. Organized one day National Webinar on **“Major Causes of Poor Health in Pakistan”** by Dr. Aasma Tufail Assistant Professor Botany, Dr. Sana Jabeen Assistant Professor, Miss Madiha Rashid Lecturer **on April 29, 2021**
9. Organized one day National Webinar on **“Roof Top Gardening”** by Dr. Aasma Tufail Assistant Professor Botany on **October 06, 2021.**
10. Organized Field trip for BS students to **“Ayub Agriculture Research institute, Faisalabad”** on **10 Dec 2019.** Ayub Agricultural Research Institute along with **Qadir Bakhsh farm house and Gatwala Wildlife Park, Faisalabad.**
11. Organized **Plantation** at DSNT lawn at **30 October 2019 and 12 Dec 2019** followed by **“Green and Clean”** Campaign. Students and faculty of Botany planted more than 100 plants in Lawn.
12. Organized Field trip for BS students to **“Rohtas Fort” and “Mangla Dam”** on **30 March 2019** Rohtas Fort is a 16th-century fortress located near the city of Jehlum in Punjab. Students visited fort and nearby places to see the diversity of plants.
13. Organized Field trip for BS students to **Changa Manga Forest at 06, April 2019.** Objective of the tour to discover the wild plants and students get the knowledge about diversity of plants.
14. Organized short tour for students on defence day **“6th September, 2019** to SA Gardens, Kala Shah Kaku near Lahore on **06 SEP 2019.** Tour was arranged to

participate in “tree plantation campaign”. Students and faculty members planted trees for the name of shuhda and visit SA garden.

15. Organized one day 2nd National symposium on “**Botanical Entrepreneurship and Businesses Development**” held on **March 25th, 2019** at Division of Science and Technology, University of Education, Township Campus, Lahore.
16. Organized one day “**National Edible Garden Symposium**” on **May 19, 2017** at Division of Science and Technology, University of Education, Township Campus, Lahore.
17. Organized One Day Study tour of **Chichawatni Reserved Forest** to study the vegetation for BS Botany 8th semester session 2013-17 Students on May 06, 2017
18. Organized exhibition on the **Scientific model** for BS Botany students on Feb, 2017

PROJECT

Established Roof Top Gardening project at the roof of New Academic Block, University of Education, Lahore after the approval of Vice chancellor at March **2023**.

ESTABLISHMENT OF UE BOTANICAL SOCIETY

First step has been taken in **2016** to establish the University of Education botanical society (UE Botanical Society) that was approved by officially at 2019 and 2022.

SCHOLARSHIP/AWARDS

1. Research Incentive awards 2017-2019
2. Awarded Scholarship under “**International Research Support initiative programmed (IRSIP)** by Higher Education Commission under supervision of Prof. Dr. Donald L. Smith in McGill University, McDonald Campus, Montreal, Canada. September 25, 2014 to March 20, 2015.
3. Awarded Scholarship under Higher Education Commission “**Indigenous 5000 Ph.D. Fellowship Program Phase II**. 2012-2016.
4. Awarded Laptop by Prime Minister Shehbaz Sharif distributed in first phase of Laptop scheme. 2012.

Member

Member of:

- Member of Department Tenured Review Committee (DTRC)
- Pink Ribbon Youth Awareness Program
- University Purchase Committee
- University Daycare Committee
- UE Botanical Garden
- Board of Studies (BOS) of Department of Botany Division of Science and Technology, University of Education Lahore

- Organizing Events and Study tour
- Ph.D. program development
- MS thesis Evaluation
- Annual Review committee
- Interview Panel Of Visiting Teacher
- Clean And Green Campaign
- UMS (University Management System) Departmental Coordinator
- Lawn Management Committee, Division Of Science And Technology
- Auction Committee, Division Of Science And Technology, University Of Education, Lahore
- Convener of 2nd National symposium on “**Botanical Entrepreneurship and Businesses Development**” held on **March 25th, 2019**
- Table Tennis Management Committee Of Annual Sports Gala 2018, 2019
- QEC Sub Quardinator, Department Of Botany
- Member of Management committee in ICE 2018. Division of Science and Technology, University of Education, Township Lahore
- Convener of Abstract editorial committee in ICE 2018. Division of Science and Technology, University of Education, Township Lahore
- Member Of Table Tanis Management Committee For Annual Sport Gala 2018 University Of Education, Township Lahore
- Secretary of MS Botany admission committee, Division of Science and Technology, University of Education, Township Lahore
- Scrutiny committee “Chinese Language Scholarship” in University of Education, Township Lahore
- Member of scrutiny committee “Turkish Language Scholarship” in University of Education, Township Lahore
- Member of scrutiny committee “Minister’s National Laptop Scheme” in University of Education, Township Lahore
- Secretary of Auction Committee, Division of Science and Technology, University of Education, Township Lahore

TAUGHT COURSES

1. Biodiversity and Conversion
2. Cell biology, Genetics and Evolution
3. Diversity of plants
4. Diversity of Vascular plants
5. Ecology-II
6. Physiology-II

7. Plant Anatomy
8. Plant Physiology and Ecology
9. Water logging and Salinity
10. Ecology of Halophytes
11. Economic Botany and Medicinal Plants
12. Agrostology

NEW PH.D COURSES DEVELOPMENT

1. Stress Physiology of Plants
2. Evolutionary Trends in Plant Anatomy
3. Agrostology

SUPERVISOR

Sr #	Degree	Number	Completed	Under Process	Total
1	BS	10	10	0	10
2	MS	36	30	6	36
3	PhD	1	0	1	1

Co- SUPERVISOR

Sr #	Degree	Number	Completed	Under Process	Total
1	BS	1	1	0	1
2	MS	6	5	1	6

Detailed of Research Students

Sr. No.	Name of Student	Registration Number	Roll No.	Program	Thesis Title	Supervisor/Co-Supervisor
1	Atika Younas		BSBOTN-F14-M08	BS Botany	Microstructural Variations of Crow Foot Grass (<i>Dactyloctenium aegyptium</i> L.) from different Geographical Regions of the Punjab, Pakistan.	SUPERVISOR
2	Farwa Shaukat		BSBOTN-	BS	Microstructural	SUPERVISOR

			F14-M12	Botany	Variations of Two Selected Species of Family <i>Chenopodiaceae</i> from Different Geographical Regions of the Punjab, Pakistan.	
3	Mehmooda Yousaf		BSBOTN-F14-M16	BS Botany	Microstructural Variations of Three Selected Species of Family <i>Euphorbiaceae</i> from Different Geographical Regions of the Punjab, Pakistan.	SUPERVISOR
4	Sana Nadeem		BSBOTN-F14-M54	BS Botany	Microstructural Variations of Buffel Grass (<i>Cenchrus ciliaris</i> L.) from Different Geographical Regions of the Punjab, Pakistan.	SUPERVISOR
5	Saqib Ali		BSBOTN-F15-M21	BS Botany	Biodiversity of the Family <i>Cyperaceae</i> from District Lahore Punjab, Pakistan on the Basis of Microstructural Study	SUPERVISOR
6	Malik Muhammad Javid		BSBOTN-F15-M06	BS Botany	Microstructural Analysis of the Road Side Plants from Lahore Region, Punjab, Pakistan	SUPERVISOR
7	Akmal Abbas		BSBOTN-F15-M42	BS Botany	Biodiversity of the Five Common Aquatic Plants on the Basis of	SUPERVISOR

					Microstructural Study from Lahore Region Punjab, Pakistan	
8	Zaira Akbar		BSBOTN-F15-E18	BS Botany	Anatomical Study on Some Representative Members of the Family <i>Myrtaceae</i>	SUPERVISOR
9	Ayesha Ismail		BSBOTN-F15-M09	BS Botany	Anatomical Characterization of the Selected Species of Family <i>Oxalidaceae</i>	SUPERVISOR
10	Muhammad Asim Riaz		MSF1700096	MS Botany	Microstructural Characterization of Different Species of <i>Asteraceae</i> from Lahore, Punjab, Pakistan	SUPERVISOR
11	Shahzad Gauhar		MSF1700074	MS Botany	Morpho-Anatomical Characterization of Some Members of <i>Panicoideae</i> from District Lahore, Punjab, Pakistan	SUPERVISOR
12	Muhammad Akbar Amin		MSF1700077	MS Botany	Effect of Aqueous Extract of <i>Jatropha integerrima</i> Jacq. on Morpho-Anatomical Features of Wheat (<i>Triticum aestivum</i> L.)	SUPERVISOR
13	Muhammad Iftikhar		MSF1700065	MS Botany	Ecotypic Microstructural Adaptations in <i>Calotropis procera</i> Ait. (Aak) from Different Regions of Punjab, Pakistan	SUPERVISOR
14	Hafiz Usman Ahmad		MSF1700092	MS Botany	Effect of Aqueous Extract	SUPERVISOR

					of <i>Calotropis procera</i> Ait. (Aak) on Morpho-Anatomical Features of Wheat (<i>Triticum aestivum</i> L.)	
15	Hafsa Saleem		MSF1800161	MS Botany	Morphological and Physiological Changes of <i>Calendula officinalis</i> L. (Pot Marigold) Irrigated with Sewage Water	SUPERVISOR
16	Ayesha Maham		MSF1800188	MS Botany	Effect of Wastewater Irrigation on Morphological and Physiological Features of <i>Dahlia pinnata</i> Cav. (Garden Dahlia)	SUPERVISOR
17	Mehmooda Yousaf		MSF1800130	MS Botany	Effect of Gama Amino Butyric Acid on the Growth, Root and Stem Anatomy of Wheat Varieties Under Salinity Stress	SUPERVISOR
18	Farwa Shaukat		MSF1800177	MS Botany	Effect of Foliar application of γ Amino Butyric Acid (GABA) on Yield, Physiology and Leaf Anatomy of Wheat Varieties Under Salinity Stress	SUPERVISOR
19	Atika Younas		MSF1800139	MS Botany		Co SUPERVISOR
20	Fazilat		MSF1900029	MS Botany	Morpho-anatomical and physiological response of two lettuce varieties	SUPERVISOR

					to salicylic acid under salt stress	
21	Iqra Afzal		MSF1900066	MS Botany	Effect of Salicylic acid priming on the germination and anatomy of two varieties of chia plant (<i>Salvia hispanica</i> L.)	SUPERVISOR
22	Komal Iqbal		MSF1900038	MS Botany	Comparatively study of Moringa leaf extract and organic fertilizers on two radish (<i>Raphanus sativus</i> L.) Varieties	SUPERVISOR
23	Swaiba Noor		MSF1900088	MS Botany	Exploring the potential of drumstick tree parts Extract for the growth and physiology of two radish varieties	SUPERVISOR
24	Zaira Akbar		MSF1900010	MS Botany	Utilization of banana peel extract to evaluate the growth, physiological and histological aspects of two varieties of tomato (<i>Lycopersicon esculentum</i> L.)	SUPERVISOR
25	Ayesha Ismail		MSF2000152	MS Botany	Effect of Different Fruit Peel Extracts on the Growth, Physiological and Anatomical Characters of Chia (<i>Salvia hispanica</i> L.)	SUPERVISOR
26	Warda Javed		MSF2000157	MS Botany	Effect of Gamma Amino Butyric Acid on Quinoa	SUPERVISOR

					(<i>Chenopodium quinoa</i> Willd.) Germplasm under Salinity Stress	
27	Muhammad Shakeel		MSF2000206	MS Botany	Effect of Soil Borne Bacteria on Growth and Physiology of Fenugreek (<i>Trigonella foenum- graecum</i> L.) Varieties	SUPERVISOR
28	Rida Ijaz		MSF2000252	MS Botany	GABA Mediated Mitigation of Salt Stress in Buckwheat (<i>Fagopyrum esculentum</i> Moench) Germplasm	SUPERVISOR
29	Mafia Shoukat		MSF2100246	MS Botany	Soil Drenching of Allelochemicals for Salinity Stress Mitigation in Sunflower (<i>Helianthus annuus</i> L.)	SUPERVISOR
30	Laraib Javaid		MSF2100292	MS Botany	Alleviation of Drought Stress in Buckwheat (<i>Fagopyrum esculentum</i> Moench) by Using Some Biofertilizers	SUPERVISOR
31	Maria Tariq		MSF2100334	MS Botany	Effect of Zinc Nanoparticles on Sunflower (<i>Helianthus annus</i> L.) Under Combined Stress of Drought and Shade	SUPERVISOR
32	Mehboobullah Khan		MSF2100367	MS Botany	Morphological Characterization and Molecular	SUPERVISOR

					Phylogeny of Macrofungi from District Mianwali, Pakistan	
33	Muhammad Asif Manzoor	21-UE-02312	mSF2201929	MS Botany	Exploring The Role of Fruit Peels Extract on Growth of Turnip To Expose Industrial Effluents	SUPERVISOR
34	Fatima Latif	18-UE-01315	MSF2201393	MS Botany	Screening of Sunflower Lines Against Water Stress and Iron Nano Particles	SUPERVISOR
35	Sundas Fatima	18-UE-02860	MSF2201399	MS Botany	Effect of Potato Peels to Alleviate The Negative Effect of Salinity in Sunflower Genotypes	SUPERVISOR
36	Fizza Arshad	22-UE-02634	MSF2201926	MS Botany	Hydroponic Production of Beetroot Under Salt Stress and Plant Growth Regulator	SUPERVISOR
37	Shaista Ronaq	23-UE-13904	msf23003529	MS Botany	" Mitigating the Adverse Effects of Salinity Stress in Sunflower by Foliar Application of Magnesium Oxide Nanoparticles	SUPERVISOR
38	Ayesha Abbas	23-UE-13896	msf23003511	MS Botany	Salt Stress Amelioration in Sunflower Through The Use of Various Vegetable Peels"	SUPERVISOR
39	Areeba Niazi	23-UE-13900	MSF23003515	MS Botany	Effect Of Methionine To Alleviate The Negative Impact Of Salinity In	SUPERVISOR

					Sunflower	
40	Muhammad Waseem	23-UE-17409	msf23007183	MS Botany	Effect of Melatonin on the Growth of Beetroot Under Salt Stress	SUPERVISOR

THESIS EVALUATION

- Total 33 MS/M.Phil and 30 BS/M.Sc. Thesis evaluated in various Universities of Pakistan as external examiner.

EXAMINER

- Working as Examiner, paper setter and Head Examiner from 2016 to date in the University of Education, Lahore.
- Performed duties as Examiner and Head examiner in the Annual practical examination BA/B.Sc. 2016 through Punjab University Lahore.

COMPUTER SKILLS

- Soft Wares (MSTATC)
- Basic Competent in Microsoft Office (Word, Power point Excel, Publisher).
- Statistical Statistics (Correlation)
- Digital Photography
- INPAGE software
- Internet and Multimedia Platforms
- Windows
- Scanners

LANGUAGE

- English
- Urdu
- Punjabi

EXTRA CURRICULAR SKILLS AND ACTIVITIES:-

- Excellent Communication And Leadership Skills.
- Effective Command On Punjabi, Urdu And English Language.
- Proficient In Experimental Instruments Usage.
- Strong Oral Presentation Skills.
- Member of Botanical Society
- Member of Soil Science Society
- Member of Agri-Tourism Development
- Member of Pakistan Horticulture Society

REFERENCES:

- Will be furnished on demand
- Reference contacts
 - **Prof. Dr. Muhammad Alam Saeed**
Director
Division of Science and Technology
University of Education Lahore
Contact No: 03044779018
Email: directordost@ue.edu.pk
 - **Prof. Dr. Abrar Hussain**
Chairperson, Department of Botany Division of Science and Technology,
University of Education Lahore
Contact No: 03334297267
Email: chairbot@ue.edu.pk
 - **Dr. Zahra Noreen**
Associate Professor, Department of Botany Division of Science and Technology,
University of Education Lahore
Email: dr.zahranoreen@ue.edu.pk
 - **Dr. Madiha Rashid**
Assistant Professor, Department of Botany Division of Science and Technology,
University of Education Lahore
Email: madiha.rashid@ue.edu.pk