CURRICULUM VITAE OF DR. IFTIKHAR ALI

Father's Name: Zulfiqar Ali
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1. PERSONAL STATEMENT:

Dr. Iftikhar Ali is an Assistant Professor in the Department of Agronomy, University of Agriculture, Faisalabad, with expertise in crop modeling, remote sensing, and climate change focusing on temperature extremes. He earned his Ph.D. degree in the subject of Agricultural Informatics from the National Engineering and Technology Center for Information Agriculture, Nanjing Agricultural University, China. His capability in conducting thermal stress studies within controlled environments highlights his expertise in this field. With extensive academic and research experience, he has honed his skills and gained proficiency in utilizing cutting-edge instruments, including:

- **LI-6800 Portable Photosynthesis System** (LI-COR Environmental, USA)
- **PAM-2500** (Heinz Walz GmbH, Germany)
- **CAPTS-Canopy Photosynthesis and Transpiration Systems** (Shanghai, China)
- **GreenSeeker** (Trimble Agriculture, USA)
- **SPAD-502** (Konica Minolta, Japan)
- **Garmin GPS eTrex 30x** (Garmin Ltd, USA)
- **LAI-2200C** (LI-COR Environmental, USA)

He has further enhanced his expertise through diverse training programs and workshops, earning certifications in crop yield estimation, remote sensing applications, and weather monitoring. Currently, he is involved in several key research projects, including serving as Principal Investigator of Cooperative Development for Overseas Applications of Intelligent Crop Monitoring with Remote Sensing and Co-Principal Investigator in establishing the Agricultural Remote Sensing Lab at UAF under the National Center of GIS and Space Applications, Islamabad. His contributions are further evidenced by international publications, with notable works exploring the impacts of temperature stress photosynthesis, growth and yield of rice and the use of remote sensing in agriculture. This multifaceted expertise underscores his position as a leading figure in agronomy, dedicated to tackling modern challenges in agriculture and promoting environmental sustainability.

2. RESEARCH INTERESTS:

- Crop Modeling, Intelligent Crop Monitoring, Remote Sensing, Climate Smart Agriculture, Temperature Extremes, Sustainable Agriculture.

3. SERVICE EXPERIENCE:

- Serving as **Assistant Professor** in Department of Agronomy, University of Agriculture, Faisalabad, from January 26, 2021, till date.
- Served as **Lecturer** in Department of Agronomy, University of Agriculture, Faisalabad, from February 17, 2017, to January 25, 2021.

4. DISSERTATION TITLE:

Ph. D. in Agricultural Informatics

Characterizing photosynthesis and yield formation under post-heading low-temperature stress in *Japonica* rice.

M. Sc. (Hons.) Agronomy

Biological nitrification inhibition potential of seed priming with allelopathic extracts in mungbean (*Vigna radiata* L.) under irrigated and rainfed conditions.

5. PUBLICATIONS:

(Google Profile: https://scholar.google.com.pk/citations?hl=en&user=2uFl1i8AAAAJ&view_op=list_works&sortby=pubdate)

A. RESEARCH PAPERS/REVIEW PAPERS

1. Haoran Sun, Zhijian Wei, Weiguo Yu, Gaoxiang Yang, Junnan She, Hengbiao Zheng, Chongya Jiang, Xia Yao, Yan Zhu, Weixing Cao, Tao Cheng, **Iftikhar Ali**. 2025. SIDEST: A sample-free framework for crop field boundary delineation by integrating super-resolution image reconstruction and dual edge-corrected Segment Anything model. *Computers and Electronics in Agriculture*. 230, 109897.
2. **Iftikhar Ali**, Kang Min, Aqib Mahmood, Dai Junjie, Wang Wei, Liu Bing, Liu Leilei, Cao Weixing, Liang Tang, Yan Zhu. 2025. Evaluating chlorophyll fluorescence potential for the characterization of leaf photosynthesis under post-heading low temperature stress. *Physiologia Plantarum*. (*accepted*)
3. Maria Tehseen, Houneida Attia, Abdul Khaliq, Muneera A Saleh, Muhammad Zia Ul Haq, Khalid H Alamer, Bader Ijaz, **Iftikhar Ali**, Shaista Perveen, Saddam Hussain. 2024. Biochemical, Physiological, and Nutrient Acquisition Response of Wheat Cultivars to Nickel and Vanadium Toxicity. *Journal of Plant Growth Regulation*. 1-24.
4. Kang Min, Siyuan Wang, Zhenkai Xu, Chenzhe Xu, Jingwei An, Yu Zhang, Yaowen Zeng, **Iftikhar Ali**, Liang Tang, Liujun Xiao, Bing Liu, Leilei Liu, Weixing Cao, Yan Zhu. 2024. Simulating the effects of low-temperature stress during flowering stage on leaf-level photosynthesis with current rice models. *Agricultural and Forest Meteorology*. 354, 110087.
5. Aqib Mahmood, Wang Wei, Muhammad Ali Raza, **Iftikhar Ali**, Liu Bing. Liu Leilei, Yan Zhu, Liang Tang, Cao, Weixing. 2024. Quantifying the individual and combined effects of short-term heat stress at booting and flowering stages on nonstructural carbohydrates remobilization in rice. *Plants*, 13.
6. Sarfraz Hussain, Ghulam Mustafa, Imran Haider Khan, Jiayuan Liu, Cheng Chen, Bingtao Hu, Min Chen, **Iftikhar Ali**, Yuhong Liu. 2023. Global trends and future directions in agricultural remote sensing for wheat scab detection: Insights from a bibliometric analysis. *Remote Sensing* 15, 3431.

7. Wajid Ali Khattak, Jiaqi He, Jianfan Sun, **Iftikhar Ali**, Wasim Bilal, Zahoor, Khalid Ali Khan, Youhua Wang, Zhiguo Zhou. 2023. Foliar melatonin ameliorates drought-induced alterations in enzyme activities of sugar and nitrogen metabolisms in cotton leaves. *Physiologia Plantarum*, 175(5), e14011.
8. Wenxin Wang, Muhammad Hafeez, Ziyu Guo, Muhammad Yasin Zia, Raufhon Salahodjaev, **Iftikhar Ali**. 2023. Effect of environmental NGOs on human health in China: An empirical analysis. *Plos ONE* 18, 0284468.
9. Aqib Mahmood, **Iftikhar Ali**, Wei Wang, Syed Tahir Ata-Ul-Karim, Bing Liu, Leilei Liu, Yan Zhu, Weixing Cao, and Liang Tang. 2022. Individual and combined effects of high-temperature stress at booting and flowering stages on rice grain yield. *Agronomy*. 12: 3092.
10. Muhammad Imran Atta, Syeda Sadaf Zehra, Dong-Qin Dai, Habib Ali, Khalid Naveed, **Iftikhar Ali**, Muhammad Sarwar, Basharat Ali, Rashid Iqbal, Sami Bawazeer, Usama K. Abdel-Hameed and Iftikhar Ali. 2022. Amassing of heavy metals in soils, vegetables and crop plants irrigated with wastewater: Health risk assessment of heavy metals in Dera Ghazi Khan, Punjab, Pakistan. *Frontiers in Plant Science*. 13: 5418.
11. **Iftikhar Ali**, Liang Tang, Junjie Dai, Min Kang, Aqib Mahmood, Wei Wang, Bing Liu, Leilei Liu, Weixing Cao, Yan Zhu. 2021. Responses of Grain Yield and Yield Related Parameters to Post-Heading Low-Temperature Stress in Japonica Rice. *Plants*. 10(7) 1425.
12. Aqib Mahmood, Wei Wang, **Iftikhar Ali,** Fengxian Zhen, Raheel Osman, Bing Liu, Leilei Liu, Yan Zhu, Weixing Cao, Liang Tang. 2021. Individual and Combined Effects of Booting and Flowering High-Temperature Stress on Rice Biomass Accumulation. *Plants*. 10(5) 1021.
13. Fengxian Zhen, Yijiang Liu, **Iftikhar Ali**, Bing Liu, Leilei Liu, Weixing Cao, Liang Tang, Yan Zhu. 2020. Short-term heat stress at booting stage inhibited nitrogen remobilization to grain in rice. *Journal of Agriculture and Food Research*. 2 100066.
14. Ai-Jie Yang, Shakeel Ahmad Anjum, Ling Wang, Song Ji-Xuan, Xue-Feng Zong, Jun Lv, Ali Zohaib, **Iftikhar Ali**, Rong Yan, Yan Zhang, Dong Yu-Feng, Wang San-Gen. 2018. Effect of foliar application of brassinolide on photosynthesis and chlorophyll fluorescence traits of *Leymus chinensis* under varying levels of shade. *Photosynthetica*. 56 873-883.
15. Lv Jun, Zong Xue-Feng, Shakeel Ahmad Anjum, Song Ji-Xuan, Zhang Yan, Dong Yu-Feng, Ali Zohaib, **Iftikhar Ali**, Xu Yu, He Xiu-Juan, Wang San-Gen. 2018. Application of plant growth regulators to *Stipa krylovii* in the Xilin Gol grassland. *Planta Daninha*. 36 e018171373.
16. Lv Jun, Zong Xue-feng, Shakeel Ahmad Anjum, Song Ji-xuan, Zhang Yan, Dong Yu-feng, Ali Zohaib, **Iftikhar Ali**, Xu Yu, He Xiu-Juan, and Wang San-Gen. 2017. Effect of plant growth regulators on *Leymus chinensis* (Trin.) Tzvel. in the Xilin Gol grassland of Inner Mongolia. *Philippine Agricultural Scientist*. 100(4) 387-394.
17. Shakeel Ahmad Anjum, Mohsin Tanveer, Nadeem Akbar, Umair Ashraf, **Iftikhar Ali**, Ali Zohaib, Nazer Manzoor. 2017. Comparative efficacy of various weed control measures in weed dynamics, yield and profitability of direct seeded fine rice. *Pakistan Journal of Agricultural Sciences*. 54 129-134.
18. Shakeel Ahmad Anjum, Umair Ashraf, Ali Zohaib, Mohsin Tanveer, Muhammad Naeem, **Iftikhar Ali**, Tahira Tabassum, Usman Nazir. 2017. Growth and development responses of crop plants under drought stress: A review. *Zemdirbyste*. 104 267-276.
19. Shakeel Ahmad Anjum, Umair Ashraf, Mohsin Tanveer, Imran Khan, Saddam Hussain, Babar Shahzad, Ali Zohaib, Farhat Abbas, Muhammad Farrukh Saleem, **Iftikhar Ali**,

Long C Wang. 2017. Drought induced changes in growth, osmolyte accumulation and antioxidant metabolism of three maize hybrids. *Frontiers in Plant Science*. 8 69.

20. Babar Shahzad, Tanveer Mohsin, Waseem Hassan, Adnan Noor Shah, Shakeel Ahmad Anjum, Sardar Alam Cheema, **Iftikhar Ali**. 2016. Lithium toxicity in plants: Reasons, mechanisms and remediation possibilities–A review. *Plant Physiology and Biochemistry*. 107 104-115.

B. BOOKS & BOOK CHAPTERS

1. Muhammad Zia Ul Haq Muhammad and Iftikhar Ali eds. 2024. Revolutionizing Pest Management for Sustainable Agriculture. Hershey, PA: IGI Global Scientific Publishing, 2024. https://doi.org/10.4018/979-8-3693-3061-6
2. Ghulam Mustafa, Yuhong Liu, Hengbiao Zheng, Meng Zhou, Imran Haider Khan, Saeed Arshad, **Iftikhar Ali**, Aqib Mehmood Khan, Bakhshah Zib. 2024. Machine Learning Algorithms for Predictive Pest Modeling in Agricultural Crops. InRevolutionizing Pest Management for Sustainable Agriculture (pp. 353-380). IGI Global.
3. Muhammad Zia Ul Haq, Mohamed S. Abdel-Kareem, **Iftikhar Ali.**, Alaa A. Fathy, Abdul Khaliq and Eman T El-Kenany. 2022. Role of Algae in Agriculture. In Handbook of Research on Algae as a Sustainable Solution for Food, Energy, and the Environment (pp. 287-310). IGI Global.

C. POPULAR/NEWS ARTICLES

1. **Iftikhar Ali** and Sadam Hussain Hussain. Hybrid Wheat: Potential Key to Food Security and Food Self-Sufficiency in Pakistan. JEAS-Blog, Agropublishers, Multan, Pakistan.
   http://jeas.agropublishers.com/2023/01/hybrid-wheat-food-security-in-pakistan/
2. Shakeel Ahmad Anjum, Ali Raza Asif, Imran Khan, Ali Zohaib, **Iftikhar Ali**. Biochar-and-soil-health-relations-and-benefits.
   https://agrihunt.com/articles/major-crops/biochar-and-soil-health-relations-and-benefits/
3. Shakeel Ahmad Anjum, Sadaf Zahra, Dr. Nadeem Akbar, **Iftikhar Ali**, Abdul Shakoor. Floods a menace-to Pakistan agriculture.
   https://agrihunt.com/articles/pak-agri-outlook/floods-a-menace-to-pakistan-agriculture/100066

6. PROJECTS ONGOING:

As Principal Investigator/Team Scientist

1. **Project Title:** National Foreign Experts Program Cooperative Development for the Overseas Applications of Intelligent Crop Monitoring with Remote Sensing (NFE-ICM)

   Project Duration: 24 months

   Date of commencement: 01/01/2023

   Total Budget: 200,000 RMB

   Funding Agency: Ministry of Science and Technology, China

2. **Project Title:** Development of tractor mounted mechanical vegetable nursery transplanter.

   Project Duration: 24 months

   Date of commencement: 01/09/2023

   Total Budget: 19.426 million PKR

Funding Agency: Pakistan Agricultural Research Board, Pakistan

As Co-Principal Investigator

1. **Project Title:** Developing Agricultural Remote Sensing Lab (ARSL) under the project tilted "Establishment of National Center of GIS and Space Applications.

   Project Duration: 36 months

   Date of commencement: 03/09/2021

   Total Budget: 74.941 million PKR

   Funding Agency: Higher Education Commission, Pakistan

2. **Project Title:** Quality seed production and supply to the farming community for ensuring food security in Pakistan.

   Project Duration: 36 months

   Date of commencement: 15/02/2022

   Total Budget: 4518.053 million PKR

   Funding Agency: Ministry of Science and Technology, Pakistan

7. HONORS AND AWARDS:

- Awardee of **50 Overseas PhD Scholarships for faculty development of UAF** funded by Government of Punjab, Pakistan.
- **Merit scholarship** holder in B.Sc. (Hons.) Agriculture and M.Sc. (Hons) Agronomy during bachelor and master studies in University of Agriculture, Faisalabad, Pakistan.
- **Quaid-e-Azam Scholarship** holder from BISE, Sargodha for excellent grades in matriculation.
- Winner of **All Punjab Science Quiz Competition,** Phase 1 Division Level, Sargodha in 2005
- Winner of **All Punjab Science Quiz Competition,** held in Lahore in 2006

8. SKILLS:

A. Dry Skills:

Have hands-on experience in working with PCs in Windows: IBM SPSS, RStudio, Google earth engine (GEE), SIGMAPLOT, Reference Managers like Mendeley and many other utility software.

B. Wet Skills:

Have expertise in operating LI-6800 Portable Photosynthesis System, PAM-2500 and CAPTS-Canopy Photosynthesis and Transpiration Systems to measure leaf and canopy level photosynthesis and chlorophyll fluorescence in plants. He has excellent skills to carry out thermal stress studies in environment control phytotron facilities.

9. CERTIFICATES/TRAININGS/WORKSHOPS:

- **Certificate of Completion**, 06 weeks International Course on Going Places with Spatial Analysis organized by Esri Training. Completed on March 09, 2025.

- **Certification of Appreciation,** for an Instructor in International Training "Advancing Cropping Systems with APSIM: Performance Analysis and Emmission Mitigation" 26-27 February 2025.
- **Certificate of Participation,** International Seminar on Biochar Impact on Soil, Crop, Human Health, and Society (A Gastroenteritis Context). Department of Agronomy, University of Agriculture, Faisalabad, Pakistan. May 25, 2022.
- **Certificate of Training,** International Hands-on-training on "Role of DSSAT and WaNuLCAS Model to Develop Site Specific Climate Resilience in Crops". University of Agriculture Faisalabad, Pakistan. 30 May-30 June 2022.
- **Certification of Participation,** International Webinar "Biofortification of Staple Crops to Combat mineral malnutrition". August 29, 2022.
- **Certificate of Completion**, International Training on, "Crop Yield Estimation and Water Accounting using Remote Sensing". CAS-AFS, University of Agriculture Faisalabad-Pakistan. 10-12 January 2023.
- **Certificate of Acknowledgement,** participating in 1 Day Workshop on Hands-On Experience on Developing CUBESATS: from Satellite to Classroom Based Educational Tool. University of Agriculture Faisalabad. February 09, 2023.
- **Certification of Participation** in International Seminar on Agro-ecological and Social Interventions of Reused Water Irrigation (A Gastroenteritis Context). Department of Agronomy & Department of Rural Sociology, University of Agriculture, Faisalabad. Feb 22-24, 2023.
- **Certification of Presentation,** in International Seminar on Agro-ecological and Social Interventions of Reused Water Irrigation (A Gastroenteritis Context). Department of Agronomy & Department of Rural Sociology, University of Agriculture, Faisalabad. Feb 22-24, 2023.
- **Certificate of Completion**, "National Faculty Development Program". National Academy of Higher Education (NAHE), HEC, Islamabad, held at HEC Regional Centre, Lahore. 20th February-10th March, 2023.
- **Certificate of Completion,** International Training Workshop on Application of Geospatial Techniques for Agriculture Resource Management. University of Agriculture, Faisalabad, Pakistan & Nanjing Agricultural University, Nanjing, China. 13-17 March 2023.
- **Certificate of Presentation,** "Yield, Quality and Economics of Hybrid Rice Cultivation in Pakistan" at 6th International Rice Congress, held in Philippines, October 16-19, 2023.
- **Certificate of Completion,** Weather Monitoring 101: Which Weather Station is Right for You. October 31, 2023
- **Certificate of Participation,** 8th International Conference of Pakistan Phytopathological Society Sustainable Agriculture & Food Security "A Nexus of Plant Pathogens, Climate Change and Water Challenges". November 26-28, 2023