

ENGR. REHAN MEHMOOD SABIR

Assistant Executive Engineer / Ph.D. Scholar
Department of Irrigation & Drainage
University of Agriculture Faisalabad



Career Objectives:

To expand skills and experience in Climate change impacts on water resources and crop productivity worldwide by using Remote Sensing and GIS. I want to develop novel techniques for drought monitoring. Based on my findings I would like to introduce new tools and techniques for the farmer's community to boost crop yield.

Personnel Information:

Nationality: Pakistani
Date of Birth: March 15, 1993
Marital Status: Single.
Religion: Islam
CNIC No: 35303-8716186-9
Domicile: Okara
E-Mail: r.m.sabir222@gmail.com / rmsabir@uaf.edu.pk
Mobile No: +92-3083903939
Permanent Address: Bama Bala Tehsil Renala Khurd District Okara, Punjab, Pakistan

Academic Record:

- Ph.D. (Agricultural Engineering) from University of Agriculture, Faisalabad, in 2021; securing a CGPA of 3.91/4.00. (Continued)
- M.Sc. (Hons.) Agri. Engineering from University of Agriculture, Faisalabad in 2020; securing a CGPA of 3.79/4.00.
- B.Sc. Agricultural Engineering from University of Agriculture, Faisalabad in 2018.

Professional Experience:

- Teaching Assistant at Department of Irrigation & Drainage, University of Agriculture Faisalabad, w. e. f. February 2022 to January 2023.
- PhD Research Fellow at Agricultural Remote Sensing Laboratory (ARSL), National Center of GIS and Space Applications (NCGSA), UAF, March 2022 to date.
- Participated in 15 Days "Survey Camp 2K16" 20 July- 3 August 2016.
- Internship in "Production Department, Mitchell's Fruit Farms Limited." Renala Khurd from 13th June - 19th July 2016.

Computational Skills:

- Water and Crops modeling/analysis software i.e., Arc GIS, HEC-HMS.
- Microsoft Office (Word, Excel, PowerPoint).
- SAS (Statistics software)

Research Work/Publications:

M.Sc. (Hons) Research Theses Title:

"Effects of Different Water Qualities on Soil Health and Yield of Alfalfa".

Papers Published:

1. Shafeeque, M., Sarwar, A., Basit, A., Mohamed, A. Z., Rasheed, M. W., Khan, M. U., Buttar, N. A., Saddique, N., Asim, M. I., & **Sabir, R. M.** (2022). **Quantifying the Impact of the Billion Tree Afforestation Project (BTAP) on the Water Yield and Sediment Load in the Tarbela Reservoir of Pakistan Using the SWAT Model.** *Land*, 11(10), 1650. <https://doi.org/10.3390/Land11101650>

Conference Papers Published:

1. Safdar, M.; Shahid, M.; Sarwar, A.; Rasul, F.; Majeed, M.; **Sabir, R.** **Crop Water Stress Detection Using Remote Sensing Techniques**, in Proceedings of the 7th International Electronic Conference on Water Sciences, 15–30 March 2023, MDPI: Basel, Switzerland, doi:10.3390/ECWS-7-14198.
2. Imran, M.; Majeed, M.; Zaman, M.; Shahid, M.; Zhang, D.; Zahra, S.; **Mehmood Sabir, R.**; Safdar, M.; Maqbool, Z. **Artificial Neural Networks and Regression Modeling for Water Resources Management in Indus Basin**, in Proceedings of the 7th International Electronic Conference on Water Sciences, 15–30 March 2023, MDPI: Basel, Switzerland, doi:10.3390/ECWS-7-14199.
3. Muzammal, H.; Zaman, M.; Shahid, M.; Safdar, M.; Majeed, M.; **Sabir, R.**; Azam, S. **Climate Change Impacts on Monsoon Flood situation in Pakistan**, in Proceedings of the 7th International Electronic Conference on Water Sciences, 15–30 March 2023, MDPI: Basel, Switzerland, doi:10.3390/ECWS-7-14255.
4. M. Safdar, M. Adnan Shahid, Sikandar Ali, Fahd Rasul, Aamir Raza, M. Danish Majeed, **Rehan Mehmood Sabir**, Hafsa Muzammal. **Synthetic Aperture Radar (Sar) Remote Sensing Applications in Agriculture** In: International Conference on Remote Sensing, GIS, and Climate Change Applications, Strategies, Solutions & Education.; 13–15 March 2023; Centre for Remote Sensing & Institute of Education and Research (IER) University of The Punjab, Lahore, Pakistan.
5. M. Safdar, M. Adnan Shahid, M. Zaman, Fahd Rasul, M. Danish Majeed, **Rehan Mehmood Sabir**, Hafsa Muzammal, Aamir Raza. **Effects Of Drought On Agriculture Production In Pakistan.** In: International Conference on Remote Sensing, GIS, and Climate Change Applications, Strategies, Solutions & Education.; 13–15 March 2023; Centre for Remote Sensing & Institute of Education and Research (IER) University of The Punjab, Lahore, Pakistan.

Book Chapters Published:

1. Rasul, F., Munir, H., Wajid, A., Safdar, M., Salman Ayub, M., Shahzad, S., **Mehmood, R.**, ... Ahmed, S. (2023). **Sustainable Irrigation Management for Higher Yield. Irrigation and Drainage - Recent Advances.** [Doi: 10.5772/intechopen.107153](https://doi.org/10.5772/intechopen.107153)

Abstracts Published:

1. M. Safdar*, M. Adnan Shahid, Fahd Rasul, **Rehan M. Sabir**, M. Danish Majeed. **“Optimizing the use of water retention polymers for improving water productivity of wheat crop”**. 1stInternational Precision Agriculture Pakistan Conference (PAPC-2022), held on 22-24 September 2022, organized by the Center for Precision Agriculture, PMAS-Arid Agriculture University Rawalpindi, Pakistan.
2. M. Safdar, M. Adnan Shahid, Abid Sarwar, Fahd Rasul, M. Danish Majeed, **Rehan M. Sabir**, Hafsa Muzammal, and Usman Zafar. **“A critical review on wastewater applications in agriculture of Pakistan”**. International seminar on “Agroecological and Social

Interventions of Reused Water Irrigation: A Gastroenteritis Context” held on 22-24 February 2023, organized by Department of Agronomy & Rural Sociology, University of Agriculture Faisalabad, Pakistan.

3. Usman Zafar, M. Safdar, Abid Sarwar, M. Adnan Shahid, Fahd Rasul, M. Danish Majeed, **Rehan M. Sabir**, and Hafsa Muzammal. “**Decolorization of textile industrial wastewater by using nano zero-valent iron: A case study of Faisalabad**”. International seminar on “Agroecological and Social Interventions of Reused Water Irrigation: A Gastroenteritis Context” held on 22-24 February 2023, organized by Department of Agronomy & Rural Sociology, University of Agriculture Faisalabad, Pakistan.
4. **Rehan Mehmood Sabir**, Abid Sarwar, Aamir Raza, M. Adnan Shahid, Syed Aftab Wajid, M. Safdar, Nalain E Muhammad. **Yield Estimation of Wheat Crop Using Remote Sensing Techniques**. In: International Conference on Remote Sensing, GIS, and Climate Change Applications, Strategies, Solutions & Education.; 13–15 March 2023; Centre for Remote Sensing & Institute of Education and Research (IER) University of the Punjab, Lahore, Pakistan.
5. Aamir Raza, M. Adnan Shahid, Fahd Rasul, *Muhammad Safdar, **Rehan Mehmood**. Unleashing the Power of Unmanned Aerial Vehicles and Robotics in Modern Agriculture. In: International Conference on Sustainable Food Security Solutions CPEC consortium of universities, May 29-31, 2023, Hosted by Department of Agronomy (UAF), IAEE & RD (UAF) and ISHU, University of Karachi.
6. Aamir Raza, M. Adnan Shahid, *Muhammad Safdar, Abid Sarwar, **Rehan Mehmood Sabir**, M Danish Majeed. Precision Agriculture: Integrating GIS, UAVS, AI, And Big Data For Global Food Security. In: International Conference on Sustainable Food Security Solutions CPEC consortium of universities, May 29-31, 2023, Hosted by Department of Agronomy (UAF), IAEE & RD (UAF) and ISHU, University of Karachi.
7. *Muhammad Safdar, M. Adnan Shahid, Abid Sarwar, Fahd Rasul, Aamir Raza, **Rehan Mehmood Sabir**, Hafsa Muzammal. Applications of IOT for Sustainable Agricultural Production in Pakistan. In: International Conference on Sustainable Food Security Solutions CPEC consortium of universities, May 29-31, 2023, Hosted by Department of Agronomy (UAF), IAEE & RD (UAF) and ISHU, University of Karachi.
8. *Muhammad Safdar, M. Adnan Shahid, Abid Sarwar, Fahd Rasul, Aamir Raza, **Rehan Mehmood Sabir**, Nalain E Muhammad. Enhancing Climate Resilience in Agriculture of Pakistan: Strategies, Challenges, and Opportunities. In: International Conference on Sustainable Food Security Solutions CPEC consortium of universities, May 29-31, 2023, Hosted by Department of Agronomy (UAF), IAEE & RD (UAF) and ISHU, University of Karachi.

Computational Skills:

1. Water and Crops modeling/analysis software i.e., Arc GIS, HEC-HMS.
2. Microsoft Office (Word, Excel, PowerPoint).

Conferences/Symposiums/Training Workshops/Webinars/Seminars Attended:

1. Certificate of participation in an international workshop on "Renewable Energy Technologies in Pakistan" held on 16-18th December 2014 at UAF.
2. Certificate of participation seminar "Personality Grooming & Enlightenment" held at UAF.
3. Certificate of participation in a workshop on "Resume Writing & Interview Skills" held on 17th Dec 2014 held at UAF.

4. Certificate of participation in an international workshop on "Renewable Energy Technologies for Community Development in Pakistan" on 4th – 6th November 2015 held at UAF.
5. Certificate of participation in a workshop "Effective Presentation Techniques" 4th Nov 2015.
6. Certificate of participation in "One-day Training Workshop on Event Hosting, Compering & Public speaking" on 28th October 2016 held at UAF.
7. Certificate of participation in an international workshop on "Sustainable Energy Solutions for Community Development in Pakistan" on 8th -9th November 2016.
8. Certificate of participation in a "Parliamentary Debates" workshop on 22 February 2017 held at University of Agriculture Faisalabad.
9. Certificate of participation seminar for CSS Aspirants "Sour to Success" 23rd February 2017.
10. Certificate of participation in a workshop on "Scientific Writing" on 27th September 2018.
11. Certificate of participation (1 CPD) workshop on "Hydrologic and Hydraulic Modeling" held at UAF from 29th January to 02nd February 2019.
12. Certificate of attending Conference on "Sustainable Urban Landscape" on 24th April 2019 Organized by the Institute of Horticulture Sciences, UAF.
13. Certificate of participation in an international virtual conference on 5th - 6th December 2021 "Halt Soil Salinization, Boost Soil".
14. Certificate of participation in the 2nd International Conference on "Hydrology and Water Resources" at Centre of Excellence in Water Resources Engineering, UET Lahore.
15. Certificate of participation in an international webinar on "Sustainable Nitrogen Management and Food Security" on 8th December 2021, at UAF
16. Certificate of participation in an international webinar on "Used of Enhanced Efficiency Fertilizers in Cotton" on 17th November 2021 organized by American Society of Agronomy.
17. Certificate of completion "Let's Break the Chain of COVID-19 Infection" from Mohammed Bin Rashid University of Medicine and Health Sciences.
18. Certificate of participation in (1 CPD) webinar on "Elevate Your Leadership Skills to Take Your Organization to the Next Level" on 7th April 2021, at Pakistan Engineering Council.
19. Certificate of participation in (0.5 CPD) webinar on "Blockchain for Integrity of Supply Chain" on 10th June 2021, at Pakistan Engineering Council.
20. Certificate of participation in (0.5 CPD) webinar on "How to Start & Grow a Business an Introduction to PNIP Investment Readiness Program." on 29th June 2021, at PEC.
21. Certificate of participation in an international symposium on 20th – 22nd October 2021 on "Salt Affected Soils" organized by the FAO.
22. Certificate of participation in an international webinar on "Issues Related to Rural Economy: How baked in are preferences for economic policies Evidence from a Customized survey experiment" on 19th November 2021 at UAF.
23. Certificate of participation in (0.5 CPD) webinar on "Health, Safety & Environment Management in Construction Industry" 28th February 2022 at Pakistan Engineering Council.
24. Certificate of participation in 19th International Congress of Soil Science on "Soil Health and Sustainable Development Goals" on 9th - 11th March 2022, at UAF.
25. Certificate of participation in (1 CPD) webinar on "External and Internal Factors that Impact Procurement Process" on 14th April 2022 at Pakistan Engineering Council.
26. Certificate of participation in (1 CPD) webinar on "IC Manufacturing Fabrication Process for Electronics Systems" on 16 April 2022, at Pakistan Engineering Council.
27. Certificate of participation in (1 CPD) webinar on "Open Channel Design for Hydropower and Irrigation" on 23rd April 2022, at Pakistan Engineering Council.

28. Certificate of participation in (1 CPD) webinar on “Centralized Versus Decentralized Approaches for Wastewater Treatment.” 28th April 2022, at Pakistan Engineering Council.
29. Certificate of participation in (1CPD) Activity on “Applications and Hands-on Training of Artificial Intelligence (AI) in Water, Food and Energy Sector” on 16th March 2022 at UAF.
30. Certificate of participation in Training Workshop on “Scientific Writing” on 18th April 2022, at the University of Agriculture Faisalabad.
31. Certificate of participation in (1 CPD) webinar on “Time and Stress Management Find Your Balance” on 23rd May 2022, at Pakistan Engineering Council.
32. Certificate of participation in an International Seminar on “Biochar Impact on Soil, Crop, Human Health, and Society” on 25th May 2022 at UAF.
33. Certificate of participation in (1 CPD) webinar on “Digital Transformation and Impact of IOT on Education, Industry, Health Sector, and Society towards Creating Job Opportunities” on 27th May 2022, at Pakistan Engineering Council.
34. Certificate of participation in (1 CPD) webinar on “Risk Assessment and Management” on 28th May 2022 at Pakistan Engineering Council.
35. Certificate of participation in (1 CPD) webinar on “Engineering Applications of Agile Methodology” on 16th June 2022 at Pakistan Engineering Council.
36. Certificate of participation in (1 CPD) webinar on “Industrial Wastewater Treatment & Recycling Technologies” on 22nd June 2022 at Pakistan Engineering Council.
37. Certificate of participation in (1 CPD) webinar on “Employers hair on attitude than any other skills” on 29th June 2022 at Pakistan Engineering Council.
38. Certificate of participation in (1 CPD) webinar on “Personal Branding and Career Choices for Engineer’s” on 5th July 2022 at Pakistan Engineering Council.
39. Certificate of participation in (1 CPD) webinar on “Planning and Design of Micro Hydropower Plant” on 16th July 2022 at Pakistan Engineering Council.
40. Certificate of participation in (1CPD) seminar on “Mechanical Rice Transplanting and Practical Demonstration of Kubota Rice Transplanter” on 20th July 2022, at UAF.
41. Certificate of participation in (1 CPD) webinar on “Public Policy: Concepts, Issues & Challenges-Engineer’s Perspective” on 26th July 2022 at Pakistan Engineering Council.
42. Certificate of participation in an international symposium on 26-29 July 2022 “Soils for Nutrition” organized by the FAO.
43. Certificate of participation in (1CPD) Activity on “Establishing Science and Technology Parks in Pakistan” at UAF.
44. Certificate of participation in (0.5 CPD) Seminar on “Seeing the Unseen: The Value of Water” on 23rd August 2022 at UAF.
45. Certificate of participation in (1 CPD) International Seminar & Training Workshop on “World Water Day 2022: Groundwater-Making the Invisible Visible” at UAF.
46. Certificate of participation in an International Training Workshop on “Crop Yield Estimation and Water Accounting Using Remote Sensing” 10th - 12th January 2023 at UAF.
47. Certificate of participation in (1CPD) workshop on “Conceptual Hydrological Modeling” Jan 23-24, 2023, at UAF.
48. Certificate of participation in (1CPD) workshop on “Hands-on Experience on Developing CubeSats: From Satellite to Classroom-Based Educational Tool” 9th February 2023, at UAF.
49. Certificate of participation in an international seminar on “Agro-ecological and Social Interventions of Reused Water Irrigation” on 22nd - 24th February 2023 at UAF.

50. Certificate of participation in an International Training Workshop 13th - 17th March 2023, on “Applications of Geospatial Techniques for Agriculture Resource Management” at UAF.
51. Certificate of participation in an International Conference on Remote Sensing, GIS, and Climate Change Applications, Strategies, Solutions & Education.; 13–15 March 2023; Centre for Remote Sensing & Institute of Education and Research (IER) University of the Punjab, Lahore, Pakistan.

Short Courses:

- | | | |
|--|---------------------------|---------------------------|
| 1. Freelancing from Digiskills | Verify At | Certificate ID: FEG2YJ2PQ |
| 2. Creative Writing from Digiskills | Verify At | Certificate ID: WHAXH5YPQ |
| 3. Graphic Design from Digiskills | Verify At | Certificate ID: Y7SKXKYPQ |
| 4. Autocad from Digiskills | Verify At | Certificate ID: 8MJ4BBQPQ |

Co-Curriculum Activities:

1. Got 2nd Position in District, 3rd Position in Division & Runner up of Chief Minister Essay Writing Competition (2014).
2. Certificate of Participation in “Engineers Night 2014”.
3. Certificate of Participation in “Intra Faculty Sports Gala 2014”.
4. Vice President at the Society of Engineers & Technologists, UAF from 2015-2017.
5. Certificate of “Chinese Language Course HSK Level 1”.
6. Certificate of participation in Nat Conference held on 15th June 2015 at UAF.
7. Participated in Annual Flower Show UAF 15-18th March 2016.
8. Certificate as Team Member in Organizing International Seminar on “World Water Day 2022”.

Professional Societies Membership:

1. The Agriversity Scout Group University of Agriculture Faisalabad
2. Society of Agricultural Engineers & Technologists University of Agriculture Faisalabad
3. Pakistan Engineering Council (PEC), AGRI/05196.

Languages Known:

Urdu, English

References:

References will be provided on demand.