BIOGRAPHICAL INFORMATION

SYED SHERAZ MAHDI, Ph.D. Agronomy

Post-Doctoral-Visiting Scientist

School of Biological and Environmental Sciences,
Liverpool John Moores University, Liverpool L3, United Kingdom

Department of Food Engineering & Security, University of Cambridge, Cambridge, U.K, and

School of Renewable Energy, Maejo University, Chiang Mai, Thailand

Permanent Position

Associate Director Research

Advanced Centre for Rainfed Agriculture, Dhiansar, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu (SKUAST-J), Chatha-180009 J&K, India

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❖ EDUCATION

2022	Post-Doc AI&ML (Agronomy), Liverpool Jhon Moores University, United Kingdom
2023	Post-Doc AI&ML (Climate Change), Maejo University, Thailand
2011	Ph.D. Agronomy, SKUAST Kashmir, Shalimar, India
2004	M.Sc. Agronomy, Br. B. R. Ambedkar University, Agra, U.P. India
2001	B.Sc. Agriculture, VBS Purvanchal University, U.P. India
2016	Diploma in Remote Sensing, GIS & GNSS, IIRS, Dehradun, Uttarakhand, India

❖ PROFESSIONAL CAREER

07/2024-contimue	Associate Director Research, ACRA, SKUAST-Jammu, India
10/2017-06/2024	Sr. Assistant Professor, Agronomy, SKUAST Kashmir, India
11/2012-09/2017	Assistant Professor (Agronomy), Bihar Agricultural University, Bihar
11/2010-10/2012	Research Associate, Indian Meteorological Department, Sgr. Kashmir

❖ RESEARCH INTERESTS & EXPERTISE BY KEYWORDS

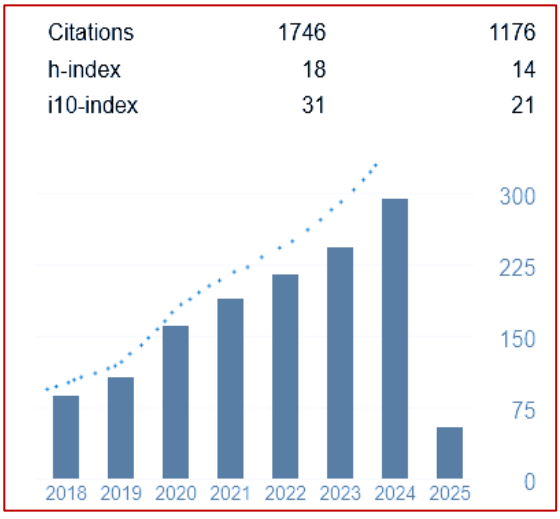
Field crops production, Crop simulation and system modeling, Climate change, impact and adaptation studies, AI&ML, Crop-weather relationship & Agrometeorological analysis.

❖ KEY SKILLS

Familiar with use of IT packages-Research Software like DSSAT v4.7, APSIM, INFOCROP) crop simulation model, SPSS, MINITAB Crop Weather Cock, Weather Meter- Kestral & AI&ML.

❖ SCHOLARLY OUTPUT & TOTAL EXPERIENCE

Scholarly output: [Total citations: 1746; h-index: 18 and i10-index: 31]
12 Years, 4 Months as on 08.03.2025



❖ TEACHING EXPERIENCE (Courses Taught)

At UG Agriculture level, taught 10 different courses
At PG Agriculture level, taught 12 different courses

❖ NEW COURSE DESIGN

- 2023: PG course-Agro-ecology, Regenerative and Conservation Agriculture (2+1)
- 2021: Restructured agricultural courses as per New Education Policy, 2020.
- 2016: Diploma course-Agri-Extension Stakeholders and Input Dealer

❖ STUDENT GUIDANCE (UG/PG/PhD)

- Under-graduate in Agriculture : 25 (As major advisor since 2012)
- Post-graduate in Agronomy : 07 (As major advisor since 2012)
- PhD in Agronomy : 01 (As major advisor since 2012)
- Co-Advisor / member advisory committee :10 (Since 2012)

❖ PROJECTS/RESEARCH GRANTS-Externally Funded Projects (Total to Date: Rs. 30.84 Cr.)

S. No	Project title and Funding agency	Budget (Rs. in Lakh)	Role	Duration
1	Sustainable farming through agro-solar model: Addressing challenges in rainfed agriculture. **SKUAST-J university funded**.	6.0	PI	2025-2028
2	Development of AI powered Agribot for precision input application in orchards and site-specific weed management in field crops, funded by **Ministry o f Electronics & Information Technology (MeitY), New Delhi**	472.0	PI	2024-2027 (03 Years)
3	Upscaling and Validation of Internet of Things IoT Based Multipurpose Pyrolizer for Residue Management Strategies Under Temperate Environment of Himalayas, funded by **DST, New Delhi**	37.0	PI	2022-2025 (03 Yrs)
4	All India Coordinated Research Project on Agrometeorology (AICRPAM), at SKUAST-K, Shalimar funded by **CRIDA, Hyderabad**	Annual Budget	Co-PI	2023-continue
5	Task Force on Himalayan Agriculture-NMSHE (2nd Phase) under the National Mission for Sustainable Himalayan Agriculture (NMSHE), funded by **ICAR Central Agroforestry Research Institute Ministry of Agriculture and Farmers Welfare, Government of India.**	74.27	Co-PI	2021-2025 (05 Yrs)
6	Impact of Season Long Temperature Increase on Quality and Yield of Aromatic Rice Landrace 'Mushkbudji' Under Temperate Climatic Conditions of Kashmir, J&K, India, Funded by **ICAR, CRIDA, Hyderabad, India**	20.75	PI	2019-2021 (03 Yrs)
7	Climate Smart Agriculture in Bihar-Global Knowledge for Local Solution. Partners: Borlaug Institute for South Asia (BISA), International Maize and Wheat Improvement Center (CIMMYT), ICAR Research Complex for Eastern Region (ICAR-RCER), Patna, Funded by **Govt of Bihar, India.**	2400.0	Co-PI	2015-2019 (05 Yrs)
8	All India Coordinated Research Project for Dryland Agriculture (AICRPDA), BAU, Sabour, funded by **ICAR, CRIDA, Hyderabad**	Annual budget	Member Secretary	2015-2017

9	Modelling the Studies on Extreme Weather Events and their Impact on Agricultural Ecosystem in Agro-Climatic Zone IIIA & B of Bihar, India, Funded by **SERB, DST, New Delhi.**	17.45	PI	2013-2016 (03 Years)

10	Predicting Regional Crop Yields and Predictor Variables Affecting Yields Using Modelling Approach for Stochastic Crop Decision Planning in Agro-Climatic Zone of IIIA And B Bihar, Funded by **Govt of Bihar.**	3.50	PI	2013-2016 (03 Years)
11	Studies on the Agro-Ecosystem Restoration in Rice Wheat Cropping Sequence in Bihar Through Agronomic Measurement Practice in the Perspective of Climate Change, Funded by **Govt of Bihar.**	18.0	Co-PI	2013-2016 (03 Years)
12	Impact of Aerosol on Cloud Formation, Onset of Monsoon, Rainfall Variability and Yield of Rice and Wheat Crop of Bihar, Funded by **Govt. of Bihar.**	4.50	Co-PI	2013-2016 (03 Years)

❖ PUBLICATIONS-Since 2012

S. No.	Particulars	Number	S. No	Particulars	Number
1	Research Papers	**53**	6	Conference Proceedings	**10**
2	Review Papers	**13**	7	Technical Bulletins	**05**
3	Books	**08**	8	Research Reports	**10**
4	Book Chapters	**27**	9	Extension Articles	**08**
5	University Annual Reports	**06**	10	**T**raining Manuals	**15**

❖ SELECTED PUBLICATIONS

S. No	Authors/Paper/Year /journal /Volume No /Page	NAAS Score	Impact Factor
1	Wani, O.A, **Mahdi, S.S** et al. 2024. Predicting rainfall using machine learning, deep learning, and time series models across an altitudinal gradient in the North-Western Himalayas. **Scientific Reports 14**, 27876 (2024). https://doi.org/10.1038/s41598-024-77687-x	10.60	4.6
2	Jehangir, I. A, **Mahdi, S.S.** et al. 2024. Deciphering the Impact of Stage-Sensitive Variable Rates of Nitrogen Management in Rape (*Brassica rapa* L.) Under Temperate Ecology. **Communications in Soil Science and Plant Analysis***, 55*(22), 3374–3384, doi.org/10.1080/00103624.2024.239701	7.80	1.8
3	**Mahdi, S.S.,** Dhekale, B.S., Jan, R., Hussain A**.** et al. 2022. Analysis and farmers perception of climate change trends in Kashmir region of Union Territory-Jammu & Kashmir, India: North Western Himalayas. **Theoretical and Applied Climatology**, 149: 727-741	9.18	3.7
4	Fayaz, U., **Mahdi, S.S**. et al. 2024. Flavor profiling and gene expression studies of indigenous aromatic rice variety (MushkBudiji) grown at different altitudes of Highland Himalayan regions. **Scientific Report**, **14**, 1010	10.6	4.6
5	Wani, O.A, **Mahdi, S.S.,** Akhter F., Kumar, S.S., Babu, S., Kanth, R.H.; Mir, S.A.; Malik, A.R., Bangroo, S., Gaafar, A.-R.Z., et al. 2023. Mitigating Soil Erosion through Biomass-Derived Biochar: Exploring the Influence of Feedstock Types and Pyrolysis Temperature. **Land**, 12 (12), 2111	9.91	3.91
6	Mir, Y.H, Ganai, M., **Mahdi, S.S**. 2023. Soil organic carbon pools and carbon management index under different land use systems in North western Himalayas **PeerJ** 11:e15266 doi.org/10.7717/peerj.15266	9.06	3.03
7	Shakoor, A.B., **Mahdi, S.S**. et al. 2022. Crop simulation mediated assessment of climate change impact on rice grown under temperate high-altitude valley of Kashmir. **Theoretical and Applied Climatology,** 147(4):1-	9.18	3.91

8	Das, L., and **Mahdi, S.S.** 2022. CMIP5 based past and future climate change scenarios over Northern Bihar, India. **Journal of Earth System Science,** 132(8): 1-8.	7.37	1.91
9	Farooq, I., Bangroo, S.A., Bashir, O., Malik, A., Qureshi, A.I., **Mahdi, S.S**. et al. 2022. Comparison of random forest and kriging models for soil organic carbon mapping in the Himalayan region of Kashmir. **Land** (ISSN 2073-445X).	9.90	3.90
10	Jehangir, I.A, **Mahdi, S.S.** 2021. Response of rice (Oryza sativa L.) cultivars to variable rate of nitrogen under wet direct seeding in temperate ecology. **Sustainability,** 14, 638.	9.25	3.88
	Asif M. Iqbal Qureshi, **S.S. Mahdi,** Z.A. Dar et. al. 2021. Insilco identification and characterization of superoxide dismutase gene family in Brassica rapa **Saudi Journal of Biological Sciences,** 28,(10):5526-553	10.22	4.21
11	Bangroo, S.A., **Mahdi, S.S., et al.** 2021. Potassium isotherm partitioning based on modified quantity-intensity relation and potassium buffering characterization of soils of North India. **Journal of Plant Nutrition and Soil Science,** 184(1):1-11	8.43	2.42
12	**Mahdi, S.S**. and Dhekale B.S. 2016. On the long-term climatology and trends of heat and cold waves over Southern Bihar, India. **Journal of Earth System Science,** 125(8): 1557-1567.	7.91	1.91
13	**Mahdi, S. S.** et al. 2021. Farmer's perception of climate change and adaptation strategies under temperate environmental conditions of Kashmir, India. **Journal of Agrometeorology,** 23 (4): 442-451	6.55	0.55
14	**Mahdi, S.S**., Dhekale, B.S., Choudhury, S. R., Haque, N. and Gupta, S.K. 2020. Magnitude, frequency, trends of heat and cold waves in recent decades and impact assessment in wheat: the case of north Bihar, India. **Journal of Agrometeorology**, 22(4): 478-488.	6.55	0.55
15	**Mahdi, S.S**., Lotus, L., Singh, G., Singh, K.N., Ahamd, L., Dar, L.A. and Bhat, A. 2015. Forecast of rice (Oryza sativa L.) yield based on climatic parameters in Srinagar District of Kashmir Valley. **Journal of Agro- meteorology**,15(1): 89-90	6.55	0.55
16	**Mahdi, S.S.** and M. Haque 2018. Calibration and validation of CERES-Wheat (DSSAT v4.6) model for wheat under irrigated conditions: model evaluation and application. **Indian Journal of Ecology**, 45(3): 555-559	5.87	

Popular Books

S. No	**Authors and Name of the book with ISBN**	**Publishers**
1	**Mahdi, S.S.,** Singh Rajbir and Dhekale, B.S. (Eds) 2024. Adapting to Climate Change in Agriculture-Theories and Practices - Approaches for adapting to climate change in agriculture in India. ISBN, 978-3031281419, pp. 289	Springer Nature Berlin, Germany
2	**Mahdi, S.S.** and Singh, R. [Eds] 2022. Innovative Approaches for Sustainable Development: Theories and Practices in Agriculture. ISBN: 978-3-030-90549-1, pp. 310.	Springer Nature Berlin, Germany
3	**Mahdi, S.S.** [Eds] 2018. Climate Change and Agriculture in India: Impact and Adaptation. ISBN 978-3-319-90086-5, pp. 262.	Springer Nature Berlin, Germany
4	Bahar, F. A., Bhat, M.A. and **Mahdi, S.S**. [Eds). 2022. Secondary Agriculture-Sustainability and Livelihood in India (1st ed.). ISBN: 978-3-031092176, pp. 280.	Springer Nature Berlin, Germany
5	Ahmed, L and **Mahdi, S.S.** [Authors] 2019. Satellite Farming-An information and Technology Based Agriculture. ISBN 978-3-030-03448-1, pp. 181.	Springer Nature Berlin, Germany
6	Ahmed, L., Kanth, R.H., Parvaze, S. and **Mahdi, S.S**. [Authors] 2017. Experimental Agro-Meteorology: ISBN 978-3-319-69185-5, A Practical Manual, pp. 159	Springer Nature Berlin, Germany
7	Singh, AK., Sohane, RK., Datt R., **Mahdi, SS.** and Das, A. [Authors] 2016. Connectivity @ Grassroots-New Vistas of Outreach. ISBN 9788176223768, pp 96.	Biotech Books, New Delhi
8	Choudhary, M.L., Patel, V.B., Siddiqui, M.W. and **Mahdi, S. S**. [Eds] 2014. Climate Change: The Principles and Applications in Horticulture Science. ISBN: 9781771880312, pp. 416	Apple Academic Press, Inc., New Jersey, USA,

❖ NATIONAL / INTERNATIONAL CONFERENCE / TRAININGS ORGANIZED-Since 2012

Event Name	Number	Role
International conference	06	Joint Organizing Secretary/ Co-Organizing Secretary
National Conference	09	Organizing Secretary / Coordinator
National / State Trainings	15	Coordinator /Co-Coordinator
National Workshops	03	Co-Organizing Secretary

❖ RESEARCH LEADER /ADMINISTRATION SERVICE (Advisory Boards/Panels)

- ❖ University Nominated Member, Bihar State Committee of Action on Climate Change (2014-2016)
- ❖ Co-Editor, University Annual and Research Reports, BAU, Sabour, Bihar (2013-2017)
- ❖ Research Protocol Officer, Bihar Agricultural University, Sabour, Bihar (2013-2017)
- ❖ Member, University Research Core Committee, BAU, Sabour, Bihar (2013-2017)
- ❖ Member, University Research Advisory Committee, BAU, Sabour Bihar (2013-2017)
- ❖ Member University Climate Change Research Team, BAU, Sabour, Bihar, (2013-2017)
- ❖ Member, University Meteorology Research Team, Bihar Agricultural University, Bihar (2013-2017)
- ❖ Member, University Crop-Simulation Modeling Team, BAU, Sabour, Bihar (2013-2017)
- ❖ In-Charge Research, Department of Agronomy, Bihar Agricultural University, Bihar (2013-2017)
- ❖ General Secretary-Indian Journal of Ecology, Ludhiana-Kashmir Chapter (2023-Continue)
- ❖ Member, Internal Agricultural Education Quality Assurance Cell, SKUAST-Kashmir(2022-Continue).
- ❖ Member, Road Map for Knowledge Based and Technology Driven Agri. Economy in Bio-Resource Rich, J&K and Ladakh, India (2022-Continue).
- ❖ Member, University Accreditation Committee, SKUAST-Kashmir (2020-Continue)
- ❖ In-Charge Research, Division of Agronomy, SKUAST-Kashmir (2018-Continue)
- ❖ Member Contingent Crop Planning Cell at SKUAST-Kashmir, (2017-Continue)
- ❖ Member, Monitoring Committee for Students' Research, FoA, Wadura (2019-Continue)
- ❖ Member, Faculty Information Technology Team, SKUAST-Kashmir (2020-Continue)
- ❖ Co-Editor, Faculty Annual and Research Reports, SKUAST-Kashmir (2019-Continue)
- ❖ University Nominated Member for Restructuring the Agricultural Courses-NEP, 2020 (2022-Continue)

❖ PATENT GRANTED

Low-Cost Temperature Controlled Pyrolyser with Heater-Cum-Cooker (Patent No. 434516, dated:14.6.2023

❖ PATENT SUBMITTED

1. Prototyping Kiosk cum decision support system for promotion of translational research
2. Portable smart vegetable garden

❖ AWARDS / FELLOWSHIP / RECOGNITION

- National Awards : 04
- International Awards : 05
- DST-Best Project Awards : 02
- SERB-DST International Research Fellowship 01
- ICAR-NAHEP Fellowship 01
- Best paper Award 08

❖ TRAININGS ATTENDED

- National Trainings: 10 International Trainings: 05 State Trainings: 05

❖ LECTURES DELIVED AS RESOURCE PERSOANS IN TRAININGS /CONFERENCES

- International / Overseas : 09 National : 15 State Level 28

❖ EDITORIAL– NATIONAL / INTERNATIONAL JOURNALS

- **2022-Continue:** Climate Resilient and Sustainability (Wiley Pub.), an interdisciplinary Open Access journal Royal of Royal Meteorological Society, Reading, England, UK
- **2021-Contnue:** Indian Journal of Ecology, Open Access Journal of Indian Society of Ecology, Ludhiana, Punjab, India

❖ MEMBERSHIP IN PROFESSIONAL SOCIETIES– NATIONAL / INTERNATIONA

- Global Food and Environment Institute (GFEI), University of Leeds, Leeds, UK (Since, 2022)
- Royal Meteorological Society, Oxford, UK. (Life Membership, 2022-Continue)
- Indian Societies of Agronomy, New Delhi, India (Life Membership since 2012)
- Association of Agro-meteorologists, AAU, Gujarat, India (Life Membership since 2016)
- Indian Ecological Society, Ludhiana, Punjab, India (Life Membership since 2017)
- Society for Agriculture Innovation and Development, Ranchi, Jharkhand, (since 2016).
- Gochar Educational & Welfare Society, Saharanpur, U.P. India (Life member since 2016)

❖ SIGNIFICANT INTERNATIONAL RESEARCH COLLABORATIONS

Date /Name of the Institution / Associated Scientist

- **2022-Continue:** University of Cambridge, Cambridge, UK (Professor Shailaja Fennell, Department of Land Economy and Dr. M. Kumar, Department of Engineering and Industries).
- **2022-Continue:** University of Oxford, Oxford, UK (Ayşe Mutlu, Data Scientist, Department of Continuing Education).
- **2022-Continue:** Liverpool John Moores University, Liverpool, UK (Dr Alexandre Gagnon, FRGS, FRMetS, Senior Professor in Geography & Climate Change)
- **2022-Continue:** University of Lincoln, Lincoln, UK (Dr. Louise Manning, Director, Sustainable Agri. Food Systems)
- **2022-Continue:** Royal Meteorological Society, Oxford, U. K (Prof. Liz Bently, Chief Executive & Prof. Vicky Pope, Department of Science & Engineering, University College London)
- **2023-Continue:** Maejo University, Chiang Mai, Thailand (Dr. Ramesh Prabhu Ramraj, Asstt. Dean, School of Renewable Energy).
- **2023-Continue:** CIMMYT, China & Chinese Academy of Agricultural Sciences, Beijing, China (Dr. Xiong Wei, Sr. Scientist, Crop Modelling, CIMMYT).

REFERENCES (04)

1. **Dr Nazir Ahmad Ganai**, (Vice Chancellor)
   SKUAST of Kashmir, Shalimar-190 025, Srinagar, J&K, India
   Tel: +91 9419018745, Email: vc@skuastkashmir.ac.in
2. **Dr. Ravi Gopal Singh** (Cropping Systems Agronomist)
   Sustainable Intensification Program
   Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT)
   Carretera México-Veracruz Km. 45, El Batán, Texcoco, México, C.P. 56237
   Email: ravigopal.singh@gmail.com
3. **Dr. R.K. Sohane** (Director Agricultural Extension Education)
   Bihar Agricultural University, Sabour-813 210, Bhagalpur, Bihar, India
   Tel: +91 06412452613 (O), Email: deebausabour@gmail.com

I hereby solemnly declare that all the statements made above are true and correct to the best of my knowledge.

Signature of the Applicant(s)

Place : Jammu, Jammu & Kashmir, (UT-J&K), India
Dated : 16.04.2025