PERSONEL INFORMATION

1. Name : Dr. Sushmita M. Dadhich
2. Designation: Associate Professor
3. Office Address: Division of Soil and Water Engineering,
   Faculty of Agricultural Engineering,
   SKUAST-Jammu, Chatha Campus ,
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Dr. Sushmita M. Dadhich is an Associate Professor in the Division of Soil and Water Engineering at the Faculty of Agricultural Engineering, SKUAST-Jammu. With over two decades of academic and research experience, she holds a Ph.D. in Water Resource Engineering from IIT Delhi and has made significant contributions to sustainable agriculture, irrigation technologies, and watershed management. A recipient of the Professional Engineer (Academic) Award, Dr. Dadhich is also a patent holder and has led and collaborated on numerous high-impact projects funded by NABARD, DST, DBT, and ICAR. Her scholarly output includes a wide array of research papers, technical manuals, and book chapters. She is actively involved in student mentorship, curriculum development, and institutional leadership, and has represented SKUAST-Jammu in national and international academic forums.

6. **Education:**

Degree	University	Year	Grade /Marks	Remarks if any
PhD in Water Resources Engineering)	Indian Institute of Technology of Delhi	2014	8.71	-
M.Tech. in Irrigation and Drainage Engineering	Govind Ballbh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India	2004	8.29	With Distinction
B.E. in Agricultural Engineering	Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, India.	2014	61.63	-

7. **Professional Carrer**

- **Associate Professor** (2022 – Present): Division of Soil and Water Engineering, Faculty of Agricultural Engineering, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu), India
- **Assistant Professor (Stage-2)** (2019 – 2022): Division of Soil and Water Engineering, Faculty of Agricultural Engineering, SKUAST-Jammu, India

- **Assistant Professor (Stage-1)** (2014 – 2019): Division of Agricultural Engineering, Faculty of Agriculture, SKUAST-Jammu, India
- **Assistant Professor** (2010 – 2014): Division of Agricultural Engineering, Faculty of Agriculture, SKUAST-Jammu, India
- **Assistant Professor** (2004 – 2005): Department of Agricultural Engineering, Institute of Engineering, Tribhuvan University, Dharan, Nepal

8. Research

S.No.	**Period**	**Sponsored by**	**Title of the Project**	PI/ Co-PI	**Sanctioned Amount**
Completed					
1.	2019 - 22	University Funded	Development and Evaluation of Rooftop Rainwater Harvesting and its Utilization for Horticultural Crops through Low-Cost Drip Irrigation System at ACRA Dhiansar	**PI**	0.85 lakh
2.	2017-Continuing	University Funded	Comparative Evaluation of Different Irrigation Methods	**PI**	3.50 lakh
3.	2016 -20	DST-SEED	Demonstration of Technologies for Improving Productivity of Rainfed Area in Jammu District	**Co-PI**	42.0 lakh
4.	2014 -16	DST (WTI)	Development and Evaluation of Automatic Timer Based VSD for Sprinkler System	**PI**	20.17 lakh
5.	2014 -16	DST	Design and Developed of tractor operated soil compaction measurement device	**Co-PI**	17.50 lakh
Ongoing					
1.	2024-2026	University Funded	Enhancing farm profitability by integrating soil water conservation techniques and climate resilient crop varieties in rainfed (kandi) areas of Jammu region	**Co-PI**	3.3 lakh
2.	2023-2026	NABARD	Strengthening / Mobilization of University Farm at Chatha	**Co-PI**	810.53 lakhs

9. PUBLICATIONS

PATENTS

1. Dadhich, S. M., Srivastava, R.K and Dadhich, H. (2024). An automatic timer-based variable speed device for a sprinkler (Indian Patent No. 549208). The Patent Office, Government of India. Filing date: June 8, 2019. Grant date: August 30, 2024.
2. Singh, A. P., Singh, B., Singh, P., Kumar, J., Kumar, V., Dadhich, S. M., Subudhi, B. N., Singh, D., & Pagoch, S. S. (2025). Smart AI-based irrigation control device (Indian Design No. 451015-001). The Patent Office, Government of India. Date of Registration: March 10, 2025. Grant date: June 06, 2025.

Recent Publications

1. Nazir, N. B., Pandey, Y., Majeed, A., Ahmad, H., Fatima, M., & Dadhich, S. M. (2025). Artificial neural networks: From fundamentals to learning paradigms. In CTAAS: Contemporary Trends in Agricultural and Allied Sciences (Vol. 5, Issue 1, pp. 453–462). SP Publishing, India.

2. Faisal, S., Pandey, Y., Ali, M., & Dadhich, S. M. (2025). Biofuel and its sources in India. In CTAAS: Contemporary Trends in Agricultural and Allied Sciences (Vol. 5, Issue 1, pp. 463–479). SP Publishing, India.

3. Pandey, Y., Tahir, M., Shukla, R. M., & Dadhich, S. M. (2025). Hydroponic cultivation system advances in smart agriculture perspective. In CTAAS: Contemporary Trends in Agricultural and Allied Sciences (Vol. 5, Issue 1, pp. 511–517). SP Publishing, India.

4. Dadhich, S. M., Srivastava, R. K., Gupta, A., & Angmo, R. (2024). Technologies for drudgery reduction of farm women. In H. Tripathi, A. Vaid, P. K. Sharma, H. Bindra, & V. K. Sharma (Eds.), Souvenir: National Agriculture Summit (20–23 November 2024) (pp. [insert page numbers]). Directorate of Extension, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu. ISBN 978-81-979496-0-5.

5. Shukla, R. M., Nazir, N. B., Pandey, Y., & Dadhich, S. M. (2024). Influence of protected cultivation structures on vegetable crops. Journal of Agriculture and Ecology Research International, 25(1), 116-122.

6. Bint Nazir, N., Pandey, Y., Qayoom, S., & Dadhich, S. M. (2024). Modelling of moisture movement and irrigation scheduling in drip irrigated tomato using CROPWAT and HYDRUS-1D. Journal of Agrometeorology, 26(2), 215-219.

7. Pandey, Y., Mehraj, N., Qureshi, M., Dadhich, S. M., & Shukla, R. M. (2024). Morphometric Analysis of Dachigam Drainage Basin Using Geo-Spatial Technology (GST). Int. J. Environ. Clim. Change, 14(2), 712-724

8. Dadhich, S. M., Pandey, Y., Mehraj, N., & Mir, G. M. (2023). A Review on Wireless Communication Technologies for Agriculture. Journal of Community Mobilization and Sustainable Development, 18(3), 1012-1022.

9. Dadhich, S. M., & Srivastava, R. K. (2022). Saving of energy through frequency control device under variable application rate of sprinkler irrigation system. Agricultural Engineering Today, 46(3), 64-67.

Old Best Publications

1. Dadhich, S. M., Singh, R. P., & Mahar, P. S. (2012). Saving time in sprinkler irrigation application through cyclic operation: A theoretical approach. *Irrigation and Drainage, 61*(5), 631–635. https://doi.org/10.1002/ird.
2. Garg, N. K., & Dadhich, S. M. (2014). A proposed method to determine yield response factors of different crops under deficit irrigation using inverse formulation approach. *Agricultural Water Management, 137*, 68–74. https://doi.org/10.1016/j.agwat.2014.02.014
3. Garg, N. K., & Dadhich, S. M. (2014). Integrated non-linear model for optimal cropping pattern and irrigation scheduling under deficit irrigation. *Agricultural Water Management, 140*, 1–13. https://doi.org/10.1016/j.agwat.2014.01.003
4. Dadhich, S. M., Dadhich, H., & Verma, R. C. (2008). Comparative study on storage of fruits and vegetables in evaporative cooler chamber and in ambient. *International Journal of Food Engineering, 4*(1), Article 2. https://doi.org/10.2202/1556-3758.1234
5. Dadhich, S. M., Faisal, S., Dadhich, H., & Srivastava, R. K. (2012). Trend of rainfall characteristics for Sunsari and Morang districts of Nepal. *Journal of Agrometeorology, 14*(1), 37–44.

10. Teaching:

Undergraduate Courses (UG)

- Soil and Water Conservation Engineering
- Protected Cultivation and Secondary Storage
- National Service Scheme (NSS)
- Strength of Materials
- Fluid Mechanics and Open Channel Hydraulics
- Irrigation Engineering
- Sprinkler and Micro Irrigation System
- Drainage Engineering
- Groundwater Engineering

Postgraduate Courses (PG)

- Ground Water Engineering
- Applied Watershed Hydrology
- Design of Drip and Sprinkler System
- Agricultural Drainage System
- Design of Farm Irrigation System
- Climate Change and Water Resources
- Minor Irrigation
- Dry Land Water Management Technologies

Student Guidance

- Postgraduate (M.Tech) – Advisor: 3 students
- Postgraduate (M.Tech) – Co-Advisor: 15 students
- Undergraduate (B.Tech) – Advisor: 25 students

11. Memberships of other professional societies:

(i) Life membership of Society for Community Mobilization for Sustainable Development (LM - 1227)
(ii) Life Member of Indian Society of Agricultural Engineering (LM-10793)
(iii) Life Member of Indian Water Resources Society (IWRS) (LM-09-7084)
(iv) Life Member of International Association of Hydrological Sciences (LM-9238)
(v) Life Member of Association of Agro meteorologists (LM- 676)
(vi) Life member of Hydrologists (LM-1523)
(vii) Life Member of Indian Association of Soil and Water Conservationists (IASWC) (LM- 1786)

12. Awards, Honors & Trainings

- **Fellowship Award (2025):** Conferred as *Fellow of the Society for Integrated Development of Agriculture, Veterinary and Ecological Sciences (SIDAVES), India* on 17th April 2025.
- **Jammu Gaurav Samman (2025):** Honored for *Outstanding Contribution to Higher Education and Research* by Jammu Sanskritik Samiti, Jammu. The felicitation ceremony was held on 12th January 2025.
- **International Training Program (2023):** Completed a one-month training at the *Asian Institute of Technology (AIT), Thailand* (12 Nov – 12 Dec 2023) under the mentorship of Prof. Sangam Shrestha. The program focused on advanced water engineering practices and was sponsored by NAHEP-IDP, SKUAST-Jammu.
- **Professional Engineer (Academic) Award (2020):** Awarded by the CTAE Alumni Society, College of Technology and Engineering, MPUAT, Udaipur, for exceptional contributions and technical advancement in Agricultural Engineering.
- **Innovative Team Awards (2018):**
  - For the *Development and Evaluation of an Automatic Timer-Based Variable Speed Device for Sprinkler System*, awarded by SIDAVES.
  - For the *Design and Development of a Tractor-Operated Soil Compaction Measurement Device*, awarded by SIDAVES.

- **Research Fellowship (2013):** Participated in a three-month training at *IIT Delhi* (April–June 2013) under the DST-FIST scheme, receiving a fellowship for research in water resources engineering.
- **Ph.D. Fellowship (2006-2010):** Awarded *Institute Teaching/Research Assistantship* during doctoral studies at IIT Delhi.
- **GATE Scholarship (2001–2003):** Awarded *M.Tech Fellowship* through GATE for postgraduate studies in Irrigation and Drainage Engineering at G.B. Pant University of Agriculture & Technology, Pantnagar.
- Qualified **ICAR-NET** in 2003

13. Any other relevant information you wish to submit:

- ✓ Serving as the Mentor of the Standards' Club at SKUAST-Jammu under the Bureau of Indian Standards (BIS), J&K since 2022.
- ✓ Coordinated the National Science Day 2020 celebrations on the theme "Women in Science," supported by J&K Science Technology & Innovative Council with ₹0.50 lakh funding.
- ✓ Organized a National Seminar on "Technology and Management of Micro Irrigation in Floriculture" as Organizing Secretary at SKUAST-Jammu in March 2015.
- ✓ Contributing as a member of the Intellectual Property Rights (IPR) Cell at SKUAST-Jammu.
- ✓ Participated in the development and construction of a drainage system at the University Research Farm, Chatha, as a committee member.
- ✓ Serving as a Member of the Editorial Board for the Journal of Association of Agro-Meteorology (Jammu Chapter).
- ✓ Delivered various invited lectures, research presentations, and training sessions, and served as a resource person and session chair at academic and farmer-focused events.
- ✓ Actively involved in organizing various student activities such as educational tours, quiz competitions, agri-fests, and sports events both within and outside the university.