

Curriculum Vitae

Dr. Afrah Al-Shukaili



Assistant Professor
Department of Soils, Water and Agricultural Engineering
College of Agricultural and Marine Sciences
Sultan Qaboos University, PO Box 34, Al-Khod 123,
Oman **Tel:** 2414 6560; **GSM:** +968 94007011
Email: a.alshukaili@squ.edu.om; farah93019@gmail.com

1. PERSONAL DETAILS

Full name	Afrah Hamed Al-Shukaili
Present position	Assistant Professor; Sultan Qaboos University (SQU)
Address	College of Agricultural and Marine Sciences, Sultan Qaboos University, Al-Khod 123, PO Box 34, Sultanate of Oman
Date of birth	05/11/1992
Nationality	Omani
Marital status	Married
Date of appointment	2023
Degrees awarded (years)	PhD in Soil & Water Management, Sultan Qaboos University, Oman (2018-2022) MSc. in Soil & Water Management, Sultan Qaboos University, Oman (2016-2018) BSc. in Water Technology, Sultan Qaboos University, Oman (2016-2018)
Work experience (Position and Dates)	<ul style="list-style-type: none">- Assistant professor, Department of Soils, Water and Agricultural Engineering, SQU, Oman (2023-Present)- Part-Time Lecturer, Department of Soils, Water and Agricultural Engineering, SQU, Oman (Fall 2022)- Teaching Assistant, Department of Soils, Water and Agricultural Engineering, SQU, Oman (Spring 2018- Spring 2022)
Research Interests and Professional Expertise	<ul style="list-style-type: none">- Surface-subsurface water flow interaction, Vadoze zone hydrology, Water resources management, Hydrogeology, Sand dunes eco-hydrology, Numerical modeling
Websites ORCID G.Scholar ResearchGate Scopus LinkedIn	https://orcid.org/0000-0002-7989-4064 https://scholar.google.com/citations?user=aMEQzsoAAAAJ&hl=en https://www.researchgate.net/profile/Afrah_Al-Shukaili https://www.scopus.com/authid/detail.uri?authorId=7004121216 https://www.scopus.com/authid/detail.uri?authorId=57219968923 https://www.linkedin.com/in/afrah-al-shukaili-a3736a103/

2. Awards, Honors, Recognition and Achievements	
Award, achievement, recognition	
<ul style="list-style-type: none"> Young Researcher Award in the International Conference on Water Resources Management and Sustainability: Solutions for Arid Regions, 22-24 March, EXPO 2020, Dubai. (2022) The Best Research Group Awards, Sultan Qaboos University (group leader –Dr. Ali Al-Maktoumi) (2021). Research and Innovations Award in Water Science for the best scientific publication (non- Ph.D. holders) category in the Research and Innovations Award in Water Science, The Research Council, Oman. Paper awarded: Al-Shukaili, A., Al-Busaidi, H., Al-Maktoumi, A., Abdalla, O., Shelukhina, O., and Kacimov, A. R. (2019). Oblique Porous Composite As Evaporating “Cap”: Do Desert Dunes Preserve Moisture By Capillary Barriers And Tilt Of Their Slopes? <i>Water Resources Research</i>, 55, 2504–2520, doi: 10.1029/2018WR024526 (2020). The best national initiative idea in the youth platform program, Oman 2040 vision (2019). Second Best Poster Award, presented in the Omani desalination researchers’ network meeting and MEDRC alumni lecture series (2018). First Place in the inter-college environmental public speaking competition, Environmental Society of Oman and Emirates Environmental Group (2017). 	
3. Teaching	
Teaching courses	
Undergraduate courses	
“Introduction to Soil & Water (SWAE2201)”, “Desertification & Land Restoration (SWAE3002)”	
4. Scholarly Activities	
Selected Refereed Journal Publications	
<ol style="list-style-type: none"> Al-Shukaili, A. & Kacimov, A.R. (2023). Experimental and numerical modelling of constructed channels in the desert sand dunes for MAR applications. <i>Desalination and Water Treatment</i>, 285(2023)78-82. Al-Mayahi, A. K., Al-Ismaily, S. S., Breitenstein, D., Al-Busaidi, H. S., Al-Maktoumi, A. K., Lehmann, P., .& Al-Shukaili, A. H. (2023). Soil water distribution and dynamics across prescribed capillary barriers under evaporating surfaces. <i>Biosystems Engineering</i>, 226, 55-70. Al-Battashi, M., Al Maktoumi, A., Kasimov, A., Al-Mayahi, A., Al-Shukaili, A., Al Ismaili, S., and Al-Belushi, M. (2022). Shallow Water Table in Arid Urban Zone: Preliminary Study at Sultan Qaboos University Campus, Oman. <i>Journal of Agricultural and Marine Sciences [JAMS]</i>, 27(1), 62-76. Kacimov, A., Al-Maktoumi, A., Al-Ismaily, S., Al-Mayahi, A., Al-Shukaili, A., Obnosov, Y., and Abdalla, O. (2021). Water Table Rise In Arid Urban Area Soils Due To Evaporation Impedance And Its Mitigation By Intelligently Designed Capillary Chimney Siphons. <i>Environmental Earth Sciences</i>, 80(17), 1-17. Kacimov, A. R., Al-Shukaili, A., Al-Mayahi, A., and Al-Maktoumi, A. (2021). Triangular Ditch of Fastest Infiltration into Porous Substratum. <i>Journal of Irrigation and Drainage Engineering</i>, 147(7), 06021002. Al-Shukaili, A., Al- Mayahi, A., Al-Maktoumi, and A., Kacimov, A.R. (2020). Unlined Trench as a Falling Head Permeameter: Analytic and HYDRUS2D Modeling versus Sandbox Experiment, <i>Journal of Hydrology</i>, 583, 124568. Al-Shukaili, A., Al-Busaidi, H., and Kacimov, A. R. (2020). Experiments, Analytical and HYDRUS2D Modeling of Steady Jet of Quasi-Normal Surface Flow in Rectangular Channel Coupled With Vertical Seepage: Vedernikov-Riesenkampf's Legacy Revisited. <i>Advances in Water</i>, 136 (2020): 103503. 	

8. **Al-Shukaili, A.,** Al-Busaidi, H., Al-Maktoumi, A., Abdalla, O., Shelukhina, O., and Kacimov, A. R. (2019). Oblique Porous Composite As Evaporating “Cap”: Do Desert Dunes Preserve Moisture By Capillary Barriers And Tilt Of Their Slopes? *Water Resources Research*, 55, 2504–2520.

Refereed Conference Papers/ Proceedings/ Books and Chapters in Books

1. **Al-Shukaili, A.,** Al-Mamari, H., and Kacimov, A. 2022. Moisture-vegetation relationships of Omani coastal dunes (nabkhas). Abstracts of the International Conference “Water Resources Management and Sustainability: Solutions for Arid Regions”, Dubai, March, 22-24, 2022. P 117. Edited by M. Sherif, M. A. Faiz and A. Sefelnasr.
2. **Al-Shukaili, A.,** Kacimov A. R., 2019. Optimal trenches for MAR by tertiary treated water: HYDRUS2D versus Vedernikov’s seepage theory revisited. In Proceedings of the International Symposium on Managed Aquifer Recharge (ISMAR 10) “Managed Aquifer Recharge: Local solutions to the global water crisis”, Ed. Enrique Fernández Escalante, Madrid, Spain, pp. 693-702.

Conference Abstracts /Poster/Chapters

1. **A. Al-Shukaili,** H. Al-Mamari, H. Al-Busaidi & A. R. Kacimov. A Lesson from Arid Regions Sand Dunes: Structured Mini-Dunes (SMDs) as Sustainable Irrigation Units. In the *39th IAHR World Congress 2022*, Granada, Spain. June 19-24, 2022.
- 2.
3. **A. Al-Shukaili,** H. Al-Mamari, & A. R. Kacimov. Moisture-Vegetation Relationships of Omani Coastal Dunes; Nabkhas. In *Water Resources Conference, EXPO 2020*, Dubai, UAE. March 22-24, 2022.
4. **A. Al-Shukaili,** & A. R. Kacimov. Experimental and Numerical Modelling of Constructed Channels in the Desert Sand Dunes for MAR Applications. In *14th Gulf Water Conference*, Riyadh, KSA (Virtual). February 2022.
5. **Al-Shukaili, A.,** Obnosov, Y., Al-Maktoumi, A., Al-Abri, R. R., & Kacimov, A. (2020, December). Salinity Variations along the Beds of Ephemeral Streams Caused by Perched Wadi Aquifers in Arid Regions. In *AGU Fall Meeting 2020*. AGU.
6. **A. Al-Shukaili,** A. R. Kacimov, & Al-Maktoumi, A. Structured Mini-Dunes (SMDs) as Self-Irrigation Units: A Lesson from the Sand Dunes of Arid Regions. In *InterPore2020*, Qingdao, China (Virtual). August 31- September 4.
7. Kacimov, A., **Al-Shukaili, A.,** Al-Mayahi, A., & Al-Maktoumi, A. (2019, December). Optimization of geometry of infiltrating wadis-trenches for MAR schemes with flash flood and treated wastewater pulses in desert dunes. In *AGU Fall Meeting 2019*. AGU <https://agu.confex.com/agu/fm19/meetingapp.cgi/Person/155824> .
8. **A. Al-Shukaili,** H. Al- Busaidi, & A. R. Kacimov. Coupled Surface-Seepage Flow Through Rectangular Trenches: MAR Applications in Sand Dunes. In the *Third Cambridge and SQU Universities Symposium in Mathematical Modelling*, SQU, Oman. April. 9-11, 2019. P.25
9. **A. Al-Shukaili,** A. R. Kacimov, & H. Al- Busaidi. Oblique porous composite as evaporating “cap”: Do desert dunes preserve moisture by capillary barriers and tilt of their slopes?. In the *Omani desalination researchers’ network meeting and MEDRC alumni lecture series*. The Middle East Desalination Research Center, Muscat, Oman. Feb.22, 2018.
10. A. R. Kacimov, A. Al-Maktoumi, Yu. Obnosov, S. Al-Ismaily, N. Yakimov, **A. Al-Shukaili.** Analytical-Numerical Modeling of Transient 1-, 2-D Darcian Flows in Stratified Reservoir Beds and Embankments of Zoned Earth-Filled Dams Subject to Flash-Flood Induced Draw-ups and Draw-downs: Kalinin’s Legacy Redux. In: *The Third International Symposium on Flash Floods in Wadi Systems* “Disaster Risk Reduction and Water Harvesting in the Arab Region. , Dec. 5-7, 2017, p.44. At: Muscat, Oman