

# **CURRICULUM VITAE**



## **PERSONAL**

**Surname:** Shadedeed

**First name:** Sameer

**Place and date of birth:** Palestine, 1978

**Marital status:** Married with four children

**Present position:** Associate Professor/Hydrological Modeling and Water Resources

**Years in the Profession:** 14

## **ADDRESS**

P. O. Box 7,

Civil and Architectural Engineering Department, An-Najah National University, Nablus, Palestine.

Mobile: 00970-599-317588

E-mail: [sshadeed@najah.edu](mailto:sshadeed@najah.edu)

## **OBJECTIVE**

As an active researcher and lecturer in the field of water and environment, I will utilize and broaden my experience and qualifications in the hydrology of dry regions, water resources management, climate change prediction, water quality monitoring, and environmental impact assessment.

## **EDUCATION**

- ✚ **January 2006 – July 2008:** Freiburg University, Germany, Ph.D. in hydrology with emphasis on surface water modeling and management of arid and semiarid regions. **Thesis title:** Up To Date Hydrological Modeling in Arid and Semi-arid Catchment, the Case of Faria Catchment, West Bank, Palestine.
- ✚ **September 2003 – December 2005:** An-Najah National University, M.Sc. in Water and Environmental Engineering with emphasis on hydrology and water resources management. **Thesis title:** GIS-Based Hydrological Modeling of Semiarid Catchments (The Case of Faria Catchment).
- ✚ **September 1997 – June 2002:** An-Najah National University, B.Sc. in Civil Engineering with emphasis on hydrology. **Thesis title:** Synthetic Modeling of Rainfall-Runoff Process of Upper Wadi Al-Faria Catchment

## **WORK EXPERIENCE**

- ✚ Supervisor engineer, School of Science, An-Najah National University (New Campus), Nablus, Palestine. 2003
- ✚ Researcher, Water and Environmental Studies Institute, An Najah National University, Nablus, Palestine. 2003-2005
- ✚ Researcher, Institute of Hydrology, Freiburg University, Freiburg, Germany. 2006-2008
- ✚ A full-time lecturer and researcher at, Civil Engineering Department and Water and Environmental Studies Institute, An Najah National University, Nablus, Palestine. 2008-Present

## **CONSULTANCY EXPERIENCE**

- ✚ Senior Consultant, Water and Environmental Studies Institute (WESI), An-Najah National University (2010-2022).
  - ❖ Conducting several types of research in the field of water resources quantity and quality, such as:

1. **GLOW-JR Project:** Rainwater Harvesting (RWH), Managed Aquifer Recharge (MAR), And Sustaining Environmental Baseflow (SEB)
  2. **UNESCO Project:** Impact of untreated wastewater on natural water bodies: Integrated risk assessment, the case of Faria catchment.
  3. **PADUCO 1 Project:** Development of Agricultural Best Management Practices to Preserve Groundwater Quality in the Faria catchment.
  4. **DFG Project:** Integrating Microwave Link Data for Analysis of Small Scale Precipitation Variability in Complex Terrain: Theoretical Aspects and Hydrological Applications.
  5. **PADUCO 2 Project:** MOBILE app for optimizing, promoting Rain WATER harvesting for a self-sustaining and self-reliant water supply.
- ❖ Supervising the work of several graduate students in the field of water and environmental engineering. For instance:
1. The MSc thesis of Sandi Alawna, entitled “Rooftop Rainwater Harvesting to Alleviate Domestic Water Shortage in the West Bank, Palestine”.
  2. The MSc thesis of Amal Atari, entitled “Characterization of Dissolve Organic Matter in Wadi Al-Badan using Fourier Transform Infrared Microspectroscopy”.
  3. The MSc thesis of Hussein Haji, entitled “Developing and Mapping Rainfall Intensity, Duration, and Frequency Curves in Al-Faria Catchment”.
  4. The MSc thesis of Hadeel Qasim, entitled “Distributed Hydrological Modeling of Semi-Arid Regions: the Case of Al-Faria Catchment, West Bank, Palestine”.
  5. The MSc thesis of Mohammed Faisal Khalaf Hanaysha, entitled “Integrating Microwave Links Data for Analysis of Solar Radiation in Nablus, Palestine”.
  6. The MSc thesis of Majd Al-Suwadeh, entitled “Modeling of Groundwater Flow for the Aquifer System in Al-Faria Catchment”.
  7. The MSc thesis of Saja Almur, entitled “Assessing Water Quality of Cisterns in Sha'rawiya Area, Tulkarm Governorate for Drinking Purposes”.
  8. The MSc thesis of Reem Abu Hijleh, entitled “Chemical and Microbial Risk Assessment of Drinking Water in Faria Catchment”.
  9. The MSc thesis of Atta Abboushi, entitled “A Preliminary Investigation of Wadi-Aquifer Interaction in Semi-Arid Regions: the Case of Faria Catchment, Palestine”.
  10. The MSc thesis of Hani Shriadi, entitled “Water Quality Modeling of Al-Qilt Stream”.
  11. The MSc thesis of Murad Al-Fuqaha, entitled “Preliminary Assessment of Applying Pre-paid Water Meters (PWMs): Selected Cases from Palestine”.
- 🚧 Freelance Consultant; worked as an individual freelance consultant for several consultation companies and firms in the fields of water resources modeling and management, environment, and strategic planning.

## **TEACHING EXPERIENCE**

### 🚧 **Undergraduate**

Engineering Hydrology, Environmental Engineering, Environment of Palestine, Fluid Mechanics, Irrigation and Drainage, GIS, Statics, Mechanics of Materials, Principles of Scientific Research and Technical Writing, and Introduction to Civil Engineering and Professional Ethics.

### 🚧 **Graduate**

Hydrological Processes and Systems, Natural Resources Management, Soil-Water-Plant Relationship, and GIS.

### 🚧 **Excellent experience with ABET accreditation requirements**

## **KEY QUALIFICATIONS**

- ✚ Hydrology, rainfall-runoff modeling;
- ✚ Climate and landuse change modeling and assessment;
- ✚ Rainfall measurement and mapping;
- ✚ Rainwater harvesting;
- ✚ Flood hazard mapping;
- ✚ Managing the scarce water resources in dry regions;
- ✚ Geographic Information System (GIS);
- ✚ GIS applications in water resources modeling, management, and planning;
- ✚ GIS applications in hydrology;
- ✚ Crop water requirements including salinity control;
- ✚ Irrigation scheduling; and
- ✚ Water quality monitoring.

## **PUBLICATIONS**

1. **Shadeed, S.**, S. Alawna, M. Riksen, L. Fleskens. Land Suitability Mapping for Rainfed Olive Tree Plantation in the West Bank, Palestine. *Desalination and Water Treatment*. 268 (2022) 194–204. doi: 10.5004/dwt.2022.28716
2. Adham, A., M. Riksen, R., Abed, **S. Shadeed**, and C. Ritsema, C. Assessing Suitable Techniques for Rainwater Harvesting Using Analytical Hierarchy Process (AHP) Methods and GIS Techniques. *Water* 2022, 14, 2110. <https://doi.org/10.3390/w14132110>
3. Judeh, T., M., Almasrim, **S., Shadeed**, H., Bian, and I., Shahrour. Use of GIS, Statistics and Machine Learning for Groundwater Quality Management: Application to Nitrate Contamination. *Water Resources*, 2022, Vol. 49, No. 3, pp. 503–514. 10.1134/S0097807822030162.
4. Imteaz, M and **S., Shadeed**. Superiority of water balance modelling for rainwater harvesting analysis and its application in deriving generalised equation for optimum tank size. *Journal of Cleaner Production*, 342. 2022. <https://doi.org/10.1016/j.jclepro.2022.130991>
5. **Shadeed, S.**, A. Jayyousi, A. Khader, C. Chwala, and H. Kunstmann. Comparative analysis of interpolation methods for rainfall mapping in the Faria catchment, Palestine. *An - Najah Univ. J. Res. (N.Sc.)*, 36(1). 2022. <https://journals.najah.edu/article/2000/>
6. Akbari, M., S. G., Meshram, R.S., Krishna, B., Pradhan, **S., Shadeed**, F., Darabi, M., Sepehri, A.R., Ildoromi, and F., Alimerzaei. Identification of the Groundwater Potential Recharge Zones using MCDM Models: Full Consistency Method (FUCOM), Best Worst Method (BWM) and Analytic Hierarchy Process (AHP). *Water Resources Management*. 2021. <https://doi.org/10.1007/s11269-021-02924-1>
7. **Shadeed, S.**, and S., Alawna. GIS-based COVID-19 Vulnerability Mapping in the West Bank, Palestine. *International Journal of Disaster Risk Reduction*. 64 (102483). 2021. <https://doi.org/10.1016/j.ijdr.2021.102483>.
8. **Shadeed, S.**, and S., Alawna. Optimal Sizing of Rooftop Rainwater Harvesting Tanks for Sustainable Domestic Water Use in the West Bank, Palestine. *Water*. 13 (573). 2021. <https://doi.org/10.3390/w13040573>
9. Alawna, S, and **S. Shadeed**. Rooftop Rainwater Harvesting to Alleviate Domestic Water Shortage in the West Bank, Palestine. *An - Najah Univ. J. Res. (N. Sc.)* Vol. 35(1), 2021. <https://journals.najah.edu/article/1788/>
10. Ghanem, M. W. Ahmed, **S. Shadeed**, and M. Riksen. Socio-Economic and Environmental Impacts Assessment of Using Different Rainwater Harvesting Techniques in Sarida Catchment, West Bank, Palestine. *Journal of Geographical Research*. 3 (2), 2020. <https://doi.org/10.30564/jgr.v3i2.1974>.
11. Almasri, M., T. Judeh and **S. Shadeed**. Nitrate Trends and Occurrences in an Agriculture-Dominated Aquifer. *Water* 2020, 12, 1121; doi:10.3390/w12041121.

12. **Shadeed, S.**, T. Judeh, and M. Riksen. Rainwater Harvesting for Sustainable Agriculture in High Water Poor Areas in the West Bank, Palestine. *Water*. 12 (380). 2020. doi:10.3390/w12020380.
13. **Shadeed, S.** C. Chwala, A. Jayyousi, A. Khader, and H. Kunstmann. Rainfall Mapping in the Faria Catchment, Palestine – Comparison and Evaluation of Six Interpolation Methods. The Second International Conference on Civil Engineering, Palestine, November 2019.
14. A. Khader, **S. Shadeed**, A. Jayyousi, H. Kunstmann, C. Chwala, J. Arnault, and T. Rummeler. WRF-Hydro Modeling of Semi-Arid Regions with Channel Transmission Loss Function: The Case Study of Faria Catchment, West Bank, Palestine. The Second International Conference on Civil Engineering, Palestine, November 2019.
15. **Shadeed, S.**, T. Judeh, and S. Alawna. Rooftop Rainwater Harvesting (RRWH) to Alleviate Domestic Water Shortage in Palestine: the case of Hebron and Bethlehem Governorates. UPWSP 5th Conference: Towards Integration in Water and Energy, Ramallah, Palestine, April 2019.
16. **Shadeed, S.**, T. Judeh, and M. Almasri. Developing a GIS-based water poverty and rainwater harvesting suitability maps for domestic use in the Dead Sea region (West Bank, Palestine). *Hydrol. Earth Syst. Sci.*, 23, 1581–1592. 2019. <https://doi.org/10.5194/hess-23-1581-2019>
17. **Shadeed, S.** GIS-based Flood Hazard Mapping in the West Bank, Palestine. *An - Najah Univ. J. Res. (N.Sc.)*, 33(1). 2019. <https://journals.najah.edu/article/1612/>
18. Khader, A. R. El-Kelani, and **S. Shadeed**. Potential artificial recharge to a semi-arid basin: Case study in a shallow. Accepted for publication. *Jordan Journal of Earth and Environmental Sciences, JJEES*. 2019.
19. **Shadeed, S.**, A. Jayyousi, H. Kunstmann, and C. Chwala. Trend Analysis of Rainfall and Temperature in Nablus for the period 1975-2015. First International Conference on Climate Change- Palestine (ICCCP). Engineers Association, Ramallah, Palestine. May 2017.
20. El-Kelani, R., **S. Shadeed**, A.F. Hasan, A. Ghodieh, and M. Burqan. Geospatial Implications Assessment of Zahrat Al Finjan Solid Waste Landfill, North of West Bank, Palestine. *IUG Journal of Natural Studies. IUGNES*, 25 (2), 1-9. 2017.
21. **Shadeed, S.**, A. Abboushi and M. Almasri. Developing a GIS-Based Agro-land Suitability Map for the Faria Agricultural Catchment, Palestine. *Int. J. Global Environmental Issues*, 16 (1/2/3), 190–204. 2017. <https://doi.org/10.1504/IJGENVI.2017.083423>.
22. Tiehatten, B., Assaf, K., Ghanem, M., Jayyousi, A., Marei, A., Mostert, E., **Shadeed, S.**, Schoups, G., Smidt, E. and Zayed, O. ‘Evaluation of water harvesting and managed aquifer recharge potential in Upper Fara’ basin in Palestine: comparing MYWAS and water productivity approaches’, *Int. J. Global Environmental Issues*, 16 (1/2/3), 29–44. 2017.
23. **Shadeed, S.** Suitability Mapping of Rainwater Harvesting in the West Bank, Palestine. Palestinian Conference on Rainwater Harvesting and Management. Birzeit University, Palestine, April 2016.
24. Hadeel, Q., **S. Shadeed** and A. Jayyousi. Application of Rainfall Runoff Distributed Model Using HEC-HMS for Al-Faria Catchment, West Bank, Palestine. Fourth International Conference on Energy and Environmental Protection in Sustainable Development (ICEEP IV). Palestine Polytechnic University, Hebron, Palestine, April 2016.
25. **Shadeed, S.**, M. Sawalhah and M. Haddad. Groundwater Quality Characterization and Assessment of Faria Catchment, Palestine. *An - Najah Univ. J. Res. (N. Sc.)*, 30. 2016.
26. Gunkel, A., **S. Shadeed**, A. Hartmann, T. Wagener and J. Lange. Model signatures and aridity indices enhance the accuracy of water balance estimations in a data-scarce Eastern Mediterranean catchment. *Journal of Hydrology: Regional Studies*. 2015. doi: 10.1016/j.ejrh.2015.08.002.
27. Abboushi A., M. Almasri and **S. Shadeed**. A preliminary investigation of wadi–aquifer interaction in the semi-arid watershed of Faria, Palestine using tracer-based methodology. *Journal of Environmental Earth Sciences*. 2014. doi: 10.1007/s12665-014-3944-8.
28. **Shadeed, S.** Climate Changes and Trends in Rainfall and Temperature of Nablus Meteorological Station. Third International Conference on Energy and Environmental

- Protection in Sustainable Development (ICEEP III). Palestine Polytechnic University, Hebron, Palestine, October 2013.
29. Abboushi, A., M. Almasri and **S. Shadeed**. Developing Quantitative and Qualitative Relationships of Wadi-Aquifer Interaction in the Semi-Arid Watershed of Faria, Palestine. Third International Conference on Energy and Environmental Protection in Sustainable Development (ICEEP III). Palestine Polytechnic University, Hebron, Palestine, October 2013.
  30. **Shadeed, S.** Spatio-temporal drought analysis in arid and semi-arid regions: A case study from Palestine. *The Arabian Journal for Science and Engineering*. 2012. doi: 10.1007/s13369-012-0504-y.
  31. **Shadeed, S.** Developing a GIS-based Suitability Map for Rainwater Harvesting in the West Bank, Palestine. Professional Environmental Education for Sustainable Development: Plugging the Hole. International Conference. Birzeit University, Palestine, November 2011.
  32. **Shadeed, S.**, M. Sawalhah, A. Abu Jaish, M. Haddad, A. Alawneh, A. Abboushi, D. Doraidi, and M. Homeidan. Overview of Quantity and Quality of Water Resources in the Faria Catchment, Palestine. International Graduate Conference on Science, Humanities and Engineering. An-Najah National University, Nablus, Palestine, May 2011.
  33. **Shadeed, S.** and J. Lange. Rainwater Harvesting to Alleviate Water Scarcity under Dry Conditions: a Case Study in Faria Catchment, Palestine. *Water Science and Engineering*, 3(2): 132-143. 2010. doi:10.3882/j.issn.1674-2370.2010.02.002.
  34. **Shadeed, S.** and M. Almasri. Application of GIS-based SCS-CN method in West Bank catchments, Palestine. *Water Science and Engineering*, 3(1), 1-13. 2010. doi:10.3882/j.issn.1674-2370.2010.01.001.
  35. **Shadeed, S.** and J. Lange. Effects of Land Use and Climate Changes on Storm Runoff Generation in Arid and Semi-Arid Catchments: Up to Date Modeling Capabilities. 2<sup>nd</sup> international conference, Water: Values and Rights. Palestine Academy for Science and Technology, Ramallah, Palestine, April 2009.
  36. **Shadeed, S.** and J. Lange. Best Surface Water Management Options for Faria Catchment: Present Knowledge and Up to Date Modeling Capabilities. 2<sup>nd</sup> international conference, Water: Values and Rights. Palestine Academy for Science and Technology, Ramallah, Palestine, April 2009.
  37. **Shadeed, S.**, J. Lange and A. Gunkel. Up To Date Hydrological Modeling in Arid and Semi-Arid Catchment, the Case of Faria Catchment, West Bank, Palestine. European Geosciences Union (EGU) Conference. Vienna, Austria, April 2008.
  38. Lange, J., A. Gunkel, **S. Shadeed**, C. Fischer, R. Krier, E. Morin, T. Grodek and L. Menzel. New insights into the variability of water resources in the Jordan River Catchment. European Geosciences Union (EGU) Conference. Vienna, Austria, April 2008.
  39. **Shadeed, S.** and H. Shaheen. GIS Based SCS-CN method for the Faria Catchment. Sustainable Development and Management of Water in Palestine, International Conference on Palestine Water, Amman, Jordan, August 2007.
  40. **Shadeed, S.** and M. Almasri. Statistical Analysis of Long-Term Rainfall Data for a Mediterranean Semi-Arid Region: A Case Study from Palestine. Sustainable Development and Management of Water in Palestine, International Conference on Palestine Water, Amman, Jordan, August 2007.
  41. **Shadeed, S.**, H. Shaheen and A. Jayyousi. Management Options of Wadi Faria Baseflow. The 11<sup>th</sup> international water technology conference, Sharm El-Sheikh, Egypt, March 2007.
  42. **Shadeed, S.**, H. Shaheen and A. Jayyousi. GIS-Based KW-GIUH Hydrological Model of Semiarid Catchments: The Case of Faria Catchment, Palestine. *The Arabian Journal for Science and Engineering*, 32 (1C), 2006.
  43. **Shadeed, S.**, A. Jayyousi and H. Shaheen. Probability Distribution of Faria-Catchment Rainfall. 1<sup>st</sup> international conference, Water: Values and Rights. Palestine Academy for Science and Technology, Ramallah, Palestine, May 2005.



44. Shaheen, H., A. Jayyousi, **S. Shadeed** and A. Jarrar. Hydrograph Estimation Using GIS Supported GIUH Model. The 9th international water technology conference, Sharm El-Sheikh, Egypt, March 2005.

#### **MAJOR TRAINING COURSES**

1. Water Accounting (17-20 May 2022, IHE, Delft, The Netherlands).
2. Basic Principles of Remote Sensing using ArcMap (September-October 2021, Online Course, International Forum for Palestinian Engineers).
3. GIS and Remote Sensing (20-27 July 2020, Online Course, University of Twente the Netherlands).
4. Climate-Smart Agriculture (CSA) “Agrohydrology and Crop Production Functions” (21-25 June 2020, Online Course, University of Wageningen, the Netherlands).
5. Proposal Planning and Writing (7-10 October 2012, Muscat, Oman).
6. World Overview of Conservation Approaches and Technologies (WOCAT) “Sustainable Land Management” (18-20 September 2011, Ramallah, Palestine).
7. GLOWA-Workshop on GIS and Hydrologic Modeling, Introduction, and Application of ZIN-Model (5-23 July 2004, Freiburg University, Germany).
8. Institutional Management (19-24 June 2004, Engineers Association, Ramallah, Palestine).
9. International Course on Anaerobic Sewage Treatment and Agricultural Reuse of Treated Effluent (17-22 January 2004, Birzeit University, Palestine).
10. Arc View 3.2 GIS (2 November-13 December 2003, An-Najah National University, Palestine).