

# OSAMA DAWOUD

**Civil Engineer, PhD.**

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<b>EDUCATION</b>	<b>UNIVERSITY OF CAMBRIDGE, CAMBRIDGE, UK</b>	
	PhD. In Geo-environmental Engineering	2011-2015
	<b>JORDAN UNIVERSITY FOR SCIENCE AND TECHNOLOGY, IRBID, JORDAN</b>	
	MSc. In Water Resources and Environmental Engineering	2005-2007
	<b>ISLAMIC UNIVERSITY OF GAZA, GAZA, PALESTINE</b>	
	BSc. in Civil Engineering	1999-2004

## PROFESSIONAL EXPERIENCE

**Action Against Hunger, Gaza, Palestine.**

*Flood Risk Mitigation Plan for Gaza Strip*

**Water Resources Expert, Oct 2017 – 2019**

- Following-up and development of stormwater and flood-risk database
- Hydrological Analysis
- Assessment and proposal of risk mitigation measures
- Design of pilot projects

**Technical Engineering Consultancy Company (TECC), Gaza, Palestine.**

*Gaza sustainable water supply program: Project implementation consultant for associated works to Gaza desalination plant*

**GIS Expert, March 2016 – April 2018**

- Preparation of “Assets Inventory Report and Associated Maps” for the water supply network and water resources in Gaza Strip.
- Preparation of an integrated revised geodatabase for the water resources and water supply and distribution assets in Gaza Strip.
- Coordination between all project experts for data transformation and delivery.
- Data mining, filtration, and analysis.
- Programming of a GIS-based blending tool and hydrological dynamic verification functions for management and planning of water supply systems in Gaza Strip.

**Engineering, Management, and Infrastructure Consultants (ENFRA), Gaza, Palestine.**

*Design of Al-Rashid Road – Phase 6 and 7: Khan Younis and Rafah.*

**Hydraulic Engineer, June 2016 – December 2016**

- Collaboration with municipalities for data collection and investigation of special requirements in the field.
- Design of the water supply network, stormwater drainage systems, and sewer systems.
- Preparation of plans, profiles, and detailed designs.
- Preparation of BOQs and specifications.

**CMWU, Gaza, Palestine.**

*Al-Qarara stormwater infiltration basin*

**Hydrological Engineer (Individual Consultant), March 2016**

- Revision of the existing designs and provision of the engineering consultancy
- Revision of verification alternatives for the design parameters including field tests.

**Engineering, Management, and Infrastructure Consultants (ENFRA), Gaza, Palestine.**

*Institutional Framework and Technical Assistant of wastewater reuse and storm water harvesting, Engineering.*

**Project Coordinator/wastewater expert December 2009-January 2011**

- Analysis of the field data
- Working on the designs for wastewater reuse pilot projects at Shiekh Ejleen WWTP,
- Assessment of storm-water harvesting at Shiekh Radwan lagoon.
- Preparation of BOQs and specifications for the pilot projects.
- Coordinating project activities.

**Al Tariq for projects and systems**

*GIS system for PWA in West Bank,*

**GIS Expert/Water Resources Engineer, January 2010 – June 2007**

- Building Geographic Information System and Spatial Database for water resources systems and hydrogeological data of West Bank and Gaza Strip.
- Data-mining, filtration, repair, and analysis.
- Setting-up geodatabase for standard structure for integration with the database system of PWA.
- Documentation of the geodatabase

**Engineering and Management Consulting Center (EMCC) and HWE**

*Setting-up Groundwater Protection Plan of the Coastal Aquifer of Gaza Strip*

**Hydrogeological Expert/GIS Expert, January 2009 – June 2009**

- Analysis of the hydrological data in Gaza Strip and reporting the existing status of the aquifer.
- Data-mining, filtration, repair, and analysis.
- Preparation and reporting of a Spatial database and a GIS for the hydrogeological data in Gaza Strip.

**Abu Shahla & Associates Co. for Engineering Consultations**

*Emergency Carrier Line for Um-El-Nasser Wastewater Treatment Plant*

**Hydraulic Engineer, September 2007.**

- Revision of the designs and proposal of necessary amendments.
- Provision of the detailed design.

**CAREER**

**ISINYE UNIVERSITY, ISTANBUL, TURKEY**

- Assistant Professor at Civil Engineering Department 2019 to present

**UNIVERSITY OF PALESTINE, AL ZAHRA CITY, PALESTINE**

- Vice Dean of Engineering College 2015 to 2019
- Head of Civil Engineering Department
- Assistant Professor at Civil Engineering Department
- *Teaching courses on: hydrology, hydraulics, and GIS.*
- Lecturer at Civil Engineering Department 2007 – 2011
- Administrator of Engineering Laboratories

**ISLAMIC UNIVERSITY OF GAZA, GAZA, PALESTINE**

Teaching Assistant 2004 - 2005

## PUBLICATIONS

- Al-Tayeb M., Abdullah Z., Dawoud O., Tayeh B A, 2020, Experimental and numerical investigations of the influence of partial replacement of coarse aggregates by plastic waste on the impact load, *International Journal of Sustainable Engineering*, 1-8.
- Dawoud, O., 2020. Modification of Hydraulic Conductivity of Sandy Soil using Seawater and Alkaline Solutions. *IOP Conf. Ser. Mater. Sci. Eng.* 800, 012011. <https://doi.org/10.1088/1757-899X/800/1/012011>
- Dawoud, O., Ahmed, T., Abdel-Latif, M., Abunada, Z., 2020. A spatial multi-criteria analysis approach for planning and management of community-scale desalination plants. *Desalination* 485, 114426. <https://doi.org/10.1016/j.desal.2020.114426>
- Jiang, N., Tang, C., Hata, T., Courcelles, B., Dawoud, O., Singh, D.N., 2020. Bio-mediated soil improvement: The way forward. *Soil Use Manag.* 36, 185–188. <https://doi.org/10.1111/sum.12571>
- Jiang Ning-Jun, Soga Kenichi, Dawoud Osama, n.d. Experimental Study of the Mitigation of Soil Internal Erosion by Microbially Induced Calcite Precipitation. *Geo-Congr. 2014 Tech. Pap., Proceedings* 1586–1595. <https://doi.org/10.1061/9780784413272.155>
- Al-Tayeb, M.M., Ismail, H., Dawoud, O., Wafi, S.R., Al Daour, I., 2017. Ultimate failure resistance of concrete with partial replacements of sand by waste plastic of vehicles under impact load. *Int. J. Sustain. Built Environ.* 6, 610–616. <https://doi.org/10.1016/j.ijbsbe.2017.12.008>
- Podda, A., Cavazza, L., Fadda, A., Vissani, M., Vascellari, M., Dawoud, O., Zoppis, R., 2018. Blending between desalinated water and other sources. *Desalination Water Treat.* 102, 76–81. <https://doi.org/10.5004/dwt.2018.21845>
- Nassar, Abdelmajid & Al-Najar, Husam & Dawoud, Osama & Abunada, Ziyad. (2015). Comprehensive Decision Approach for Sustainable Wastewater Reuse using Multicriteria Decision Analysis-GIS. *Journal Of Engineering Research And Technology.* 2. 1-6.
- Dawoud, Osama & Faluoji, Islam. (2017). Safety for Life: Every Step along the Construction Industry Way. *Journal of Civil Engineering and Architecture Research.* Vol. 4, No. 4, 2017, pp. 1996-2002
- Dawoud, O., Abu-Nada, Z. (2012) Multi-criteria decision analysis using GIS: A comprehensive decision approach for sustainable wastewater reuse. *Arab Innovation Network, First Conference.* Ain, United Emirates.
- Dawoud, O., Chen, C.Y., Soga, K., 2014. Microbial Induced Calcite Precipitation for Geotechnical and Environmental Applications. *American Society of Civil Engineers*, pp. 11–18.
- Dawoud O., Chen C. Y., Soga K., n.d. Microbial-Induced Calcite Precipitation (MICP) Using Surfactants. *Geo-Congr. 2014 Tech. Pap., Proceedings.*

## CURRENT RESEARCH

- Research Project: “Smart Water Supply Systems for Gaza Strip”. Funded by Al-Quds Academy for Scientific Research
- Development of Water Blending Tool for Water Resources in Gaza Strip
- Development of Filter Caps for Infiltration Boreholes Employing Porous Concrete
- Supervising MSc. Student: Modeling of Sediments Generation and Transport by Stormwater Runoff in Asqula Basin
- Supervising MSc. Student: Assessment of Limited-Size Storage/Infiltration Units as an Upstream Solution for Floods Control.

## ADDITIONAL SKILLS

- Advanced theoretical and practical experience in GIS applications and software (ArcGIS and other supporting tools, such as Hydrological Analysis Toolbox)
- Good programming skills using ArcPython which is needed for development of GIS-based tools.

- Experience using analysis models for stormwater drainage systems and facilities such as (HAESTAD Products: StormCAD, CivilStorm, CulvertMaster, and FlowMaster and AUTODESK Products: Storm and Sanitary Analysis 2017).
- Long experience in lecturing, training, and preparation of training materials.
- Excellent command of English for technical writing and communication.

## **REFERENCES**

**Prof. Kenichi Soga (PhD. Supervisor)**

Email: [soga@berkeley.edu](mailto:soga@berkeley.edu)

**Dr. Abdulmajid Nassar (Professional Work Supervisor)**

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