



## Shafer H. Zyoud

📍 Silet Al Harithia, Jenin, Palestine

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### Personal information

- Nationality: Palestinian
- Date of birth: Sept., 6<sup>th</sup> 1976
- Place of birth: Silet Al-Harithia, Jenin, Palestine
- Marital status: Married
- Gender: Male

### Summary of qualifications & education

- 2017, Ph.D., Civil Engineering, Doctoral School of Civil Engineering, Graz University of Technology, Graz, Austria, (with distinction).
- 2003, M.Sc., Civil Engineering, An-Najah National University, Nablus, Palestine.
- 1998, B.Sc., Civil Engineering, Mosul University, Iraq Republic.

### Professional experience

- **Assistant Professor**; Building Engineering Department, Faculty of Engineering and Technology, Palestine Technical University, Kadoorei, Tulakerm, Palestine.
- **Researcher** at the Institute of Urban Water Management and Landscape Water Engineering, Graz University of Technology, Graz, Austria. Oct. 2014-now.
  - Conducting research in fields related to environmental research, water resources management, particularly in developing countries.
  - Attending courses related to water resources management (water quality, ground water production, landscape water engineering, model-based optimisation of water distribution networks, research Seminar-Urban water systems).
  - Attending seminars and workshops to present the outcomes of my research.
  - Attending seminars on presentation techniques.
  - Attending seminars on papers' writing.
  - Having experience in teaching: asset management, landscape water engineering, water distribution systems and ground water production.

- **Engineering Analyst** at the United Nations Development Programme (UNDP)-Programme of Assistance to the Palestinian People (PAPP), Palestine. Sept. 2005-Dec. 2014.
  - Projects' Manager (Engineering Analyst): for constructions & Infrastructure projects, North Area, West Bank (Water Networks, Transmission Lines, Pumping Stations, Water Treatment Plants, Sewage Collection Systems, Hospitals, Mental Health Centers, Educational Centers, Court Houses, Vocational Centers and Community Centers).
  - Trainer, Lecturer: for workshops & Training courses organized by UNDP, and responsible for training newly graduated engineers enrolled in UNDP for training.
  - Senior Designer: for Constructions & Infrastructure projects.
  - Evaluator within a team: for contracts, designs, technical specifications, tender documents, contractors' performance.
  - Quality Control: for all technical and constructions activities.
  - Coordinator: with all technical project personnel, counterpart engineers, contractors and clients.
  - Discussing and scrutinizing with the end user/counterpart the inputs in relation with the targeted output(s).
  
- **Head of engineering department**, Burqin Municipality, Jenin, Palestine. Nov. 2001-August 2005.
  - Managing all the activities of the engineering department and the projects of the municipality.
  - Senior designer for all infrastructure and constructions projects.
  - Preparing designs, bill of quantities, tender documents for various infrastructure and constructions projects.
  - Preparing proposals for seeking funds for constructions & infrastructure projects
  
- **Projects' manager & senior structural engineer**, Al-Aqsa Engineering Company, Jenin, Palestine. Nov. 1999-Oct. 2001.
  - Managing all activities related to the projects of the Company.
  - Participating in supervision, design, and monitoring of the projects of the company.
  - Supervisor, senior structural engineer: projects of construction and finishing commercial centers and residential buildings.

- Manager of training unit for newly graduated engineers.

## Research background & areas of interest

My research interests are devoted to develop methodologies and tools to improve the performance of water supply networks, increase the efficiency of water utilities and improve the water supply services, particularly in developing countries. The focus of my research is on integrating the multi-criteria decision making techniques in water loss management practices to improve the planning policies of water utilities and to reach a better control over water losses based on consensus and transparent decisions. The motivation of my research is attributed to the need of mitigating the deficiencies associated with adoption of complex operation techniques of water distribution networks in most of developing countries, e.g. intermittent water supply services. This type of water supply services is driven by different factors such as: increasing water demands in parallel with water scarcity conditions and technical and economic deficiencies. This approach is counterproductive to the objectives of water supply networks and has numerous associated failures like: inequitable distribution of water, risks on public health and increasing the rates of assets deterioration or the high rates of bursts as a result of pressure fluctuations. One of the major promising approaches toward mitigation the previously mentioned deficiencies is the promotion of water loss management practices. Furthermore, my research interests are extended to address critical environmental issues in Arab world such as wastewater management, pharmaceutical wastewater, solid waste management and groundwater pollution.

## Published articles

**Zyoud S. H.**, Shaheen H., Samhan S., Rabi A., Al-Wadi F. and Fuchs-Hanusch D. (2016). **Utilizing analytic hierarchy process (AHP) for decision making in water loss management of intermittent water supply systems.**

Journal of Water Sanitation and Hygiene for Development 6(4), 534-46. DOI: 10.2166/washdev.2016.123. [Publisher: International Water Association (IWA), Country where published: United Kingdom].

**Zyoud S. H.**, Kaufmann L. G., Shaheen H., Samhan S. and Fuchs-Hanusch D. (2016). **A framework for water loss management in developing countries under fuzzy environment: Integration of Fuzzy AHP with Fuzzy TOPSIS.** Expert Systems with Applications 61, 86-105. DOI:

<http://dx.doi.org/10.1016/j.eswa.2016.05.016>. [Publisher: Elsevier, Country where published: United States].

**Zyoud S. H.** and Fuchs-Hanusch D. (2017). **A bibliometric-based survey on AHP and TOPSIS techniques.** Expert Systems with Applications 78, 158-81. DOI:

<https://doi.org/10.1016/j.eswa.2017.02.016>. [Publisher: Elsevier, Country where published: United States].

**Zyoud S. H.**, Fuchs-Hanusch D., Zyoud S. H., Al-Rawajfeh A. E. and Shaheen H. Q. (2017). **A bibliometric-based evaluation on environmental research in the Arab world**. International Journal of Environmental Science and Technology 14(4), 689-706. DOI: 10.1007/s13762-016-1180-3. [Publisher: Springer nature, Country where published: Germany].

**Zyoud S. H.** and Fuchs-Hanusch D. (2016). **Estimates of Arab world research productivity associated with groundwater: a bibliometric analysis**. Applied Water Science, 1-18. DOI: 10.1007/s13201-016-0520-2. [Publisher: Springer nature, Country where published: Germany].

**Zyoud S. H.**, Al-Rawajfeh A. E., Shaheen H. Q. and Fuchs-Hanusch D. (2016). Benchmarking the scientific output of industrial wastewater research in Arab world by utilizing bibliometric techniques. Environmental Science and Pollution Research 23(10), 10288-300. DOI: 10.1007/s11356-016-6434-6. [Publisher: Springer nature, Country where published: Germany].

**Zyoud S. H.** and Fuchs-Hanusch D. (2015). Estimates of Arab world research productivity associated with desalination: a bibliometric analysis. IDA Journal of Desalination and Water Reuse 7(1-4), 3-16. DOI: <http://dx.doi.org/10.1179/2051645215Y.0000000001>. [Publisher: Taylor & Francis Online, Country where published: United States].

Zyoud S. H., **Zyoud S. H.**, Al-Jabi S. W., Sweileh W. M. and Awang R. (2016). Contribution of Arab countries to pharmaceutical wastewater literature: A bibliometric and comparative analysis of research output. Annals of Occupational and Environmental Medicine 28(1). Article number 28. DOI: 10.1186/s40557-016-0117-0. [Publisher: BioMed Central, Country where published: United Kingdom].

Zyoud S. H., Al-Jabi S. W., Sweileh W. M., Al-Khalil S., **Zyoud S. H.**, Sawalha A. F. and Awang R. (2015). The Arab world's contribution to solid waste literature: A bibliometric analysis. Journal of Occupational Medicine and Toxicology 10(1). Article number 35. DOI: 10.1186/s12995-015-0078-1.

[Publisher: BioMed Central, Country where published: United Kingdom].

Areej A. Al-Bedoor, Alaa M. Al-Maabreh, Aiman Eid Al-Rawajfeh, Hossam Etawi, Mazen N. Al-Amaireh, **Shaher H. Zyoud** (2017). Quality of drinking water in storage tanks in Tafila province, Jordan. Trends in Chemical Engineering. 16, 35-44.

## Published books

**Shaher Zyoud** "Multi-criteria Decision Making Techniques for Water Loss Management in Water Supply Networks of Developing Countries". Band 76 von Schriftenreihe zur Wasserwirtschaft. Verlag der Technischen Universität Graz, 2017. ISBN: 3851255429, 9783851255423.

## Accepted papers for conferences

**Zyoud S. H.** and Fuchs-Hanusch D. (2015). Utilizing analytic hierarchy process as a tool to manage water losses in intermittent water supply systems. Name of conference: Water and Development Congress & Exhibition. Time & location: 19-22 October 2015, Jordan. Organizer: International Water Association (IWA).

**Zyoud S. H.** and Fuchs-Hanusch D. (2015). Utilizing analytic hierarchy process (AHP) as a tool to manage water losses in intermittent water supply systems. Name of conference: River Basin Management 2015. Time & location: 17 - 19 June 2015, A Coruña, Spain. Organizer: Wessex Institute, United Kingdom.

**Zyoud S. H.** (2015). Bibliometric analysis study of scientific publications output on Hydrograph during the period extended from 2003 to 2012. Name of conference: River Basin Management 2015. Time & location: 17 - 19 June 2015, A Coruña, Spain. Organizer: Wessex Institute, United Kingdom.

## Professional service

- **Reviewer for the following journals:**
  - **Expert Systems with Applications**  
[Impact factor: 3.92, Publisher: Elsevier, ISSN: 0957-4174]
  - **Applied microbiology and Biotechnology**  
[Impact factor: 3.42, Publisher: Springer, ISSN: 0175-7598]
  - **Artificial Intelligence Review (AIRE)**  
[Impact factor: 2.627, Publisher: Springer, ISSN: 0269-2821]
  - **Resources, Conservation and Recycling Journal**  
[Impact factor: 3.28, Publisher: Elsevier, ISSN: 0921-3449]

- **International Journal of Environmental Science and Technology**  
[Impact factor: 2.344, Publisher: Springer, ISSN: 1735-1472]
- **International Journal of Information Technology & Decision Making**  
[Impact factor: 1.664, Publisher: World Scientific, ISSN: 0219-6220]
- **Land Use Policy**  
[Impact factor: 3.089, Publisher: Elsevier, ISSN: 0264-8377]
- **Journal of Water Supply: Research and Technology-AQUA**  
[Impact factor: 0.807, Publisher: International Water Association (IWA), ISSN: 0003-7214]
- **Water-Open access journal**  
[Impact factor: 1.687, Publisher: MDPI, Switzerland, ISSN: 2073-4441]
- **Indian Journal of Engineering & Materials Sciences**  
[Impact factor: 0.456, Publisher: NISCAIR & Indian National Science Academy, ISSN: 0971-4588]
- **International Journal of Water (IJW)**  
[Impact factor: -, Publisher: Inderscience Publishers, ISSN: 1465-6620]
- **The 3<sup>rd</sup> international conference on fuzzy systems and data mining (FSDM 2017)**, Nov. 24-27, 2017. National Dong Hwa University, Hualien, Taiwan. Supported by: **1**.  
[Impact factor: 1.11, Publisher: Springer, ISSN: 1868-8071]

## Training

- Training Course (Online): Basic Security in the Field – Staff Safety, Health, and Welfare, UNDP, 23.03.2006.
- Training Course (Online): Ethics Training Assessment, UNDP, 09.03.2008.
- Training Course (Online): Advanced Security in the field, UNDP, 31.07.2008.
- Training Course (Online): Basic Security in the Field (BSITF II), UNDP, 03.12.2011.
- Training Course, Developing Abilities and Working in the Emergency Periods, Palestinian Center for Peace and Democracy, 07.2003-08.2003.
- Training Workshop in the field of Preparing Tenders and Guidelines of Bidding Orders and Contracts according to World Bank Rules, EMSRP (Emergency Municipal Support Program), 07.2004-08.2004.
- Training Workshop in the field of Municipal Solid Waste Management in Low-Income Countries, Joint Services Council of Solid Waste, Jenin, 09.2004-10.2004.

## Languages

- **Arabic:** native language

- **English:** written, reading and spoken
- **German:** written, reading and spoken (basic)

### **Computer skills**

- Having experience in engineering computer programs for design and analysis of water distribution systems, storm flow, flow and culverts: WaterCAD, EPANET, FlowMaster, StormCAD, CulvertMaster, Wesnet, Aquinet.
- Having experience in engineering computer programs for drawing, analysis, and design: AutoCAD, STAAD III, P-Frame, SAP2000, CDS (Concrete Design Software), PROKON, RCD, SOFTDESK, ArcView, ETAB, SAFE.
- Others: MS project, SPSS, Microsoft office Applications, MATLAB, Internet Applications and Python Programming Language.

### **Honor and awards**

- Grant during the first year of Master due to academic excellence.
- PhD scholarship-ERASMUS MUNDUS-AVEMPACE III Programme.

### **Memberships**

- Jordanian Engineering Association-Amman, Jordan.
- Palestinian Engineering Association-Jerusalem Center.