

RESUME

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HIGHLIGHTS

- *Education in Water Resources/Environmental, and Irrigation Engineering.*
- *Experience in Wastewater & Biosolids- Reuse, Management, and Technology Transfer.*
- *Experience in Irrigation & Drainage Systems- Design, Evaluation, and Management.*
- *Experience in Water Demand and Irrigation Scheduling.*
- *Experience in Building Environmental Control & Automated Weather Stations.*
- *Experience in Vapor/Heat Fluxes & Remote Sensing Instrumentation.*
- *Experience in teaching methods and practices.*

Citizenship: Jordanian.

Family Status: Married with 3 Children

EDUCATION

- Sep. 1991 – **Utah State University, USA**
Aug. 1995 **Ph.D. Irrigation Engineering**
Thesis: Lake Evaporation: A Model Study.
- Sep. 1985 – **Jordan Univ. of Science and Technology, Jordan**
Mar. 1988 **M.Sc. Water Resources and Environmental Engineering**
Thesis: An Investigation on the Seepage Loss of Wadi Arab Earth Dam.
- Sep. 1981 – **Yarmouk University, Jordan**
Jun. 1985 **B.Sc. Civil Engineering**
Graduation Project: Design and Analysis of Three Types of Waste-water Treatment Plants for Irbid City.
- Sept. 1979 – **Al-Rass Secondary School, Qassim, Kingdom of Saudi Arabia.**
June, 1980 Secondary General Education Certificate (Science Section).

PROFESSIONAL EXPERIENCE

Sep. 2011 – **Qassim Univesrity – Buraidah, Kingdom of Saudi Arabia**
Aug. 2015 ***Associate Professor, Civil Engineering Department.***

Sep. 2010 – **Philadelphia University – Amman, Jordan**
Aug. 2011 ***Visiting Associate Professor, Civil Engineering Department.***

Besides teaching, the following activities have been practiced:

- Established the Fluid Mechanics/Hydraulics Lab and Environment Lab. The task involved analyzing the required equipment, studying different company proposals, and allocating the necessary budget.
- Participating in the Institution of the Civil Engineering Study Plan at the newly established Civil Engineering Department at the university and detailed the Course Materials.
- Serving as an interviewing committee member for recruited staff and faculty members for the newly established Civil Engineering Department.
- Documenting the department reports for the Higher Education Ministry in order to get the formal accreditation.
- Serving and participating as a committee member in many Faculty/Department- professional committees.

Sep. 2009 – **Qatar University – Doha, Qatar**
Jun. 2010 ***Visiting Associate Professor, Civil Engineering Department.***

Besides teaching, I participated in the preparation process for **ABET** committee visit for renewal of **ABET** accreditation. Also, I participated in writing the proposal to open Master program in the area of environmental engineering in the Civil Engineering Department.

Sep. 1995 – **Jordan University of Science and Technology – Irbid, Jordan** ***Associate Professor, Civil Engineering Department,***
Present (Dec. 2003 – Present)

Acting Chairman, Department of Biosystems Engineering,
(Feb. 2000 –Aug. 2001)

Assistant professor, (Sep. 1995 – Dec. 2003)

Besides teaching, the following activities have been practiced:

- Assisting in preparing the study plan for the B.Sc. and M.Sc. programs in the Department of Biosystems Engineering, Civil Engineering Department, and Natural Resources & Environment Department.
- Established the Irrigation Lab and Soil Lab. The task involved analyzing the required equipment, studying different company proposals, and allocating the necessary budget.
- Served as chairman and/or Participated as a committee member in many University/Department- official/professional committees.

Sep, 1991 –
Aug., 1995

Utah State University – Logan, USA

Graduate student & Teaching and Research Assistant

Duties included assistance of undergraduate students in many courses in the area of irrigation water scheduling and management, Writing many simulation models and reports about crop water requirements, irrigation management and evaporation from lakes. Also, attended and participated in many scientific conferences, seminars, and workshops.

Oct. 1985 –
Feb. 1988

Jordan University of Science and Technology – Ibid, Jordan

Graduate student and Teaching Assistant

Duties included grading and tutorial assistance to the undergraduate students in the Civil Engineering Department; some of the courses were Fluid Mechanics, Hydraulics, Sanitary Engineering, Groundwater Hydrology, Engineering Drawings, and others.

Taught Courses:

Statics, Structural Mechanics & Structural Analysis, Engineering Economics, Numerical Methods, Engineering Graphics, Environmental Engineering, Selected Topics in Water Resources, Fluids Mechanics, Hydraulics, Hydrology, Soil Science, Soil Science Laboratory, Soil Physics, Soil-Plant-Water Relationships, Evapotranspiration, Principles of Irrigation and Drainage, Irrigation Engineering, Drainage Engineering, Irrigation and Drainage Laboratory, Water Control Systems, Design of Sprinkle and Trickle Irrigation Systems, Biophysics and Plant Microclimate, Environmental Design of Buildings, Irrigation & Water Management, Water Demand Management, and Graduation Projects I & II.

COMPUTER SKILLS

Popular Software: Microsoft Office (Word, Excel, Access, etc.), Corel WordPerfect Suite (WordPerfect, Quattro Pro, etc.), SPSS and SAS (statistical packages), ERDAS, AUTO CAD, laSurfer, Pizazz plus, Lotus Freelance, etc.

Hydrology & Irrigation Models: HEC-HMS, HEC-Pack, MODFLOW, SMS, WMS, GMS, REF-ET, CROPWAT, CRPSM, PlantMod, SIRMOD, B2D, COMMOD, CATCH-3D, SALTMOD, DRAINMOD, LeachMod, AZSched, PDM, and many others.

Programming: Fortran, QuickBasic, Mat-Lab, and Data Logger programming.

PROFESSIONAL MEMBERSHIPS

- Jordanian Professional Engineers Association (Jordan)
- Soil Science Society of America (U.S.A.)
- American Society of Civil Engineers (U.S.A.)
- American Society of Agricultural Engineers (U.S.A.)

SCIENTEFIC RESEARCH

- Consultancy Service for the Preparation of a Feasibility Study for construction of Decentralized Wastewater Treatment Plant(s) as Well as the Households and Sewer Connections and reuse System in Rehab Villages (Bwaidhah Gharbiyyeh; Dajaniyyeh) – Mafraq Governorate requested by The Water Authority of Jordan (WAJ) in cooperation with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
- Farm Level Optimal Water management: Assistance for Irrigation under Deficit (FLOWAID)-“WP7: Irrigation Strategy with Dual Quality Water” Contract no. 036958 funded (87,000 €) by EC.
- Technology Transfer Program on Wastewater and Biosolids Reuse with cooperation with International Arid Land Consortium (IALC, USA) and Badia Research & Development Center (BRDC, Jordan) funded (\$40,000) by the USAID.
- Treated Wastewater Reuse Pilot Project at Jordan University of Science and Technology funded (\$500,000, three phases) by the USAID, Amman, Jordan.
- Investigating the Effect of Mulch Type on Beans Growth and Development under Trickle Irrigation with Different Irrigation Regimes. Grant # 174/99 funded by the Scientific Research Department, Jordan University of Science and Technology. Irbid, Jordan.
- Effect of Light Screening on Plant Growth and Productivity. Grant # 153/99 funded by the Scientific Research Department, Jordan University of Science and Technology. Irbid, Jordan.
- The Economics of Mechanical Weed Control vs. Chemical Control in Beans under Different Tillage Systems and Irrigation Regimes. Grant # 167/99 funded by the Scientific Research Department, Jordan University of Science and Technology. Irbid, Jordan.
- The Use of Artificial Neural Networks in Modelling Soil Evapotranspiration. Funded by the Scientific Research Department, Jordan University of Science and Technology. Irbid, Jordan.
- Estimating Water Consumptive Use and Irrigation Scheduling for Major Crops in Jordan. Grant # 184/2000 funded (19,000 JD) by the Higher Council for Science and Technology (HCST). Jordan.

- Management of Soil Erosion in the Zarqa River Basin Using Hydrological Modeling and GIS. Funded by the Scientific Research Department, Jordan University of Science and Technology. Irbid, Jordan.
- Agricultural Land Classification and Selection the proper crops using GIS and Decision Support Systems (DSS). Funded by the Higer Council for Science and Technology. Amman, Jordan.
- Modeling Soil Watter Retention Curves (Soil Characteristic Curves) Using Van Genuchten Model for Some Selected Soils in Jordan with different Salinity levels and/or Organic Matter/other additives Contents.
- Using Plant Photosynthesis Meter (PPM) and Plant Porometer in studying drought effect on field crops and light screening effect on indoor- plants grown inside green houses as well as for outdoor plants grown in open fields.

ADDITIONAL PROFESSIONAL ACTIVITIES AND FIELD EXPERIENCE

- Member in the Water, Soil and Environment Research Council, National Center for Agricultural Research and Extension (NCARE), Baqa', Jordan. Aug. 2008 – Aug. 2011.
- Member in the Irrigation and Land Committee, the Higher Council for Science and Technology, Amman, Jordan. Oct. 2008 – Aug. 2011.
- Member in the Water and Environment Committee for Scientific Research Priorities and Needs in Jordan, the Higher Council for Science and Technology, Amman, Jordan. July 2009 – Aug. 2010.
- Participated (as A Technical Committee Member) on the regional symposium “Irrigation Management and Saline Conditions” which was held on June 21-23, 1999. This regional symposium was funded by the French Embassy - the regional mission for water and agriculture (MREA) in cooperation with Jordan Valley Authority (JVA), and the German Technical Cooperation Agency (GTZ).
- Organized and conducted a short course on Crop Water Requirements and irrigation scheduling & Managements. This course is conducted twice a year during the years 2002-2009.
- Organized and conducted a short course on Automated Weather Stations: "Installation and Operation of Electronic Weather Stations" March 1-3, 1999.

- Participated on conducting a GIS short course: “Engineering Applications of Geographical Information Systems (GIS)” March 8-10, 1999.
- Participated on conducting a short course on Water & Waste Water Management, Engineers Training Center, Jordan Engineers Association, June 22-26, 2003.
- Participated on conducting an extensive Water Demand Management Course sponsored by WEPIA/USAID, July 11-22, 2004.
- Participated on conducting a short course on Wastewater Reuse at Jordan University of Science and Technology in May 6-15, 2007.
- Participated on conducting a short course on Structures for Water Control and Distribution at Jordan University of Science and Technology in March 16-27, 2008.
- Participated in the farmer education workshops in Utah, U.S.A. to demonstrate crop water requirements, irrigation scheduling and water management. Also, participated in the evaluation of surge irrigation research and demonstration on onion field plots, 1994-1995.
- Installed, programmed, and maintained agro-meteorological electronic weather stations in Utah, U.S.A. Also had a good experience using advanced energy balance systems such as Bowen Ratio and Eddy Correlation, besides, Remote sensing instrumentations and techniques for agricultural applications, 1993-1995.
- Programmed and calibrated four agro-meteorological electronic weather stations in Jordan (Marou, Sharhabeel, Dear Al’a, and Karamah Station). The four electronic weather stations are connected to the mainframe computer center in Baqa’ via modem-phone networking. This agro-meteorological electronic weather station networking belongs to the National Center for Research and Technology Transfer (NCRIT), Ministry of Agriculture. Dec., 1999 - March, 2000.
- Supervised many undergraduate “graduation-projects” for design and evaluation of Trickle Irrigation Systems inside and outside Jordan University of Science & Technology (JUST), 1996 – To date.
- Supervised several graduate “master thesis” in the Civil Engineering Department and Natural Resources and Environment Department at Jordan University of Science & Technology (JUST), 2000 – To date.
- Worked as Construction Engineer for the Royal Medical City Transportation Project in Amman, Jordan. The project was constructed by the Engineering units of the Jordan Army Forces, Sep. 1988 – March 1990.

AWARDS AND SCHOLARSHIPS RECEIVED

- College of Engineering Honors list, Yarmouk University, 1981-1985.
- Scholarship from Jordan University of Science and Technology (1991-1995).
- Utah State University Graduate Award (1993, 1995).
- College of Engineering Honors list, Utah State University, 1991-1995.

JOURNAL REFEREE

- Arabian Journal for Science and Engineering, Saudi Arabia.
- Jordan Journal of Earth & Environmental Sciences. Jordan
- Agricultural Water Management, USA.
- Archives of Agronomy and Soil Science, Germany.
- Water Policy, UK.

POINTS OF INTEREST:

- Hydraulic and Hydrological studies,
- Irrigation and drainage,
- Evaporation and evapotranspiration,
- Crop water requirements and water management,
- Plant microclimate and agronomy studies,
- On farm irrigation water management.
- Water demand management in Agriculture,
- Crop production functions and supplementary irrigation studies,
- Using brackish and marginal water in irrigation,
- Treated Waste Water & Biosolids Reuse,
- Weather stations and Energy budget instrumentations,
- Green houses and buildings environmental control,
- Light screening and quantum yield studies,
- Remote sensing techniques and its applications,
- Computer models related to water resources & environment, and irrigation engineering.

PUBLICATIONS AND PRESENTATIONS

Amayreh, J.A. 1993. Studies of Lake Evaporation - Development of the Program LKEVAP. Unpublished report. Biological and Irrigation Engineering Dept., Utah State University. Logan, Utah, U.S.A.

Amayreh, J.A. 1994. Lake Evaporation Estimation Methods and Comparisons,” Appendix C of: Consumptive Use of Irrigated Crops in Utah- Final Report, by R.W. Hill. Research Report 145 submitted to Utah Division of Water Resources and Utah Division of Water Rights. Utah Agricultural Experiment Station Project No. 796, Utah State University, Logan, Utah, U.S.A.

Jumah Amayreh, R.W. Hill, R.G. Allen, and C.M. Neale. 1995. “Determination of the Evaporation and Energy Budget Components of a High Desert Lake in Idaho-Utah”, Experiment Station journal paper #4851. Utah Agricultural Experiment Station, Utah State University, Logan, Utah, U.S.A.

Amayreh, J.A. 1995. “Alkaftania Crop Water Management Project: COMMOD Model Analysis studies”. Unpublished report. Biological and Irrigation Engineering Dept, Utah State University, Logan, Utah, U.S.A.

Amayreh, J.A. 1997. “An Investigation on the Seepage Loss of Wadi Arab Earth Dam”. Proceedings of The 1st Annual Conference & Exhibition in Water Technology Organized by Qatar Expo for Conferences, Training and Consulting CTC in Collaboration with Water Training International WTI (UK), March 22-24, 1997, Doha, Qatar.

Amayreh, J.A. and N. Al-Abed, “Applications of Remote Sensing in Agricultural Engineering”. Presented on Remote Sensing Technology workshop. Al al-Bayt University. January 9, 1997.

Al-Abed, N., and Jumah Amayreh, “GIS Applications in Agricultural Engineering”. Presented on Remote Sensing Technology workshop. Al al-Bayt University. January 9, 1997.

Amayreh, J.A. 1999. “Review of Remote Sensing Applications in Agricultural Engineering”. Proceedings of the 1999 International Wireless and Telecommunications Symposium/Exhibition. May 18-22, 1999. Sha Alam, Malaysia. Pp 261-264.

Aljalil H., J. A. Amayreh, and N. Abu-Hamdeh. 2002. “Effect of Different Seed Spacing Practices on the Evapotranspiration and yield of Faba Bean” AMA. 33(4): 41-42 (0.06).

Abdulla, F.A., J.A. Amayreh, and A.H. Hossain. 2002. "Single Event Watershed Model for Simulating Runoff Hydrograph in Desert Regions". *Water Resources Management*. 16: 221-238.

Amayreh, J. A., N. Al-Abed, A. Nassar, E. Massad, L. Alrousan, and E. Bany-Amer. 2003. "Modeling Soil Water Retention Curves Using Van Genuchten's Model for Several Agricultural Soils in Jordan". *Archives of Agronomy and Soil Science*. 49 (5): 427-433.

Amayreh, J. A., and N. Al-Abed. 2003. "Determination of Actual Evapotranspiration and Crop Coefficients of Broad Bean (*Vicia Faba L.*) Grown under Field Conditions in the Jordan Valley, Jordan". *Archives of Agronomy and Soil Science*. 49 (6): 655-662.

Al-Abed, N. and J.A. Amayreh. 2003. Polyacrylamide Polymer (PAM) Effect on the Propagation of the Wetting Front on a Jordanian Soil Under Trickle Irrigation System. *Archives of Agronomy and Soil Science*. Vol. 49(3):289-299.

Al-Abed, N., J.A. Amayreh, E. Shudifat, L. Qaqish, and G. El-Mehaisin. 2003. Polyacrylamide (PAM) Effect on Irrigation Induced Soil Erosion and Infiltration. *Archives of Agronomy and Soil Science*. Vol. 49 (3): 301-308.

Al-Abed, N., J.A. Amayreh, A. Al-Afifi, and G. Al-Hiyari. 2004.: Bioremediation of a Jordanian Saline Soil: A Laboratory Study. *Communications in Soil Science and Plant Analysis*. 35 (9): 1457-1467. (0.42)

Khdaif, A.I., F.Al-Rjoub, J.A. Amayreh. 2003. Suitability of Five Lentil Cultivars for Mechanical Harvesting. *Legume Research*. 26(2): 85-89. (0.09)

Al-Abed, N., E. Shudifat, J. Amayreh. 2003. Modeling a Rotation Supply System in A Pilot Pressurized Irrigation Network in the Jordan Valley, Jordan. *Irrigation and Drainage Systems*. 17: 163-177.

Amayreh, J.A., N. Al-Abed. 2005. Developing Crop Coefficients for Field-Grown Tomato (*Lycopersicon Esculentum Mill.*) under Drip Irrigation with Black Plastic Mulch. *Agricultural Water Management Journal*. 73:247-254.

Amayreh, J.A., N. Al-Abed, and J. Abu-Ashour. 2006. Effect of Light Screening on Pistachio Trees Quantum Yield and Productivity. In: *Proceedings of the International Symposium on Water and Land management for Sustainable Irrigated Agriculture*. Adana-Turkey, 4-8 April, 2006. [Online]. Adana: Cukurova University Press, 7 p. URL: <http://symp2006.cu.edu.tr/Osman%20Tekinel/pdf/Klaartje_Jumah_AMAY_REH.pdf>

Abu-Zreig, M., M. Al-Sharif, and J. Amayreh. 2007. Erosion Control of Arid land in Jordan with Two Anionic Polyacrylamides. *Arid Land Research and Management*. 21:4, 315-328.

Aljalil H., J. Amayreh, and M. Al-Widyan. 2007. Feasibility of Collecting Ambient Air Moisture by Forced Condensation. *AMA*. 38(1): 51-54.

Al-Gazawi, Z., J. Amayreh, L. Rousan, and A. Hijazi. 2008. Waste Water Reuse for Agriculture-Pilot Project at the Jordan University of Science and Technology. CH24 of Al Baz et al. (eds), "Efficient Management of Wastewater". Springer-Verlage Berlin Heidelberg. pp 283-297.

Rousan. L.M., M.J. Rusan, and J. A. Amayreh. 2008. Irrigation with Treated Wastewater under Full and Deficit Soil Moisture Conditions. *International Conference on Construction and Building Technology (ICCBT): Conference D- International Conference on Innovation on Water Resources and Environmental Engineering*. Kuala Lumpur, June 16-20, 2008. ICCBT- D-(38)- pp 405-416.

Al-Gazawi Z., J. Amayreh, L. Rousan, and A. Hijazi. 2008. Waste Water Reuse for Agriculture-Pilot Project at the Jordan University of Science and Technology. *International Conference on Construction and Building Technology (ICCBT): Conference D- International Conference on Innovation of Water Resources and Environmental Engineering*. Kuala Lumpur, June 16-20. ICCBT- D-(40)- pp 425-438.

Samarah, N., A.M. Alqudah, J.A. Amayreh, and G.M. McAndrews. (2009). Late-terminal Drought Stress on Yield Components of Barley in Semiarid Mediterranean Region. *Journal of Agronomy and Crop Science*. 195(6). 427-441.

Amayreh, J.A., F. Abdulla, and H. Al-Ja'afreh. (2013). Impact of Different Water Price Levels on Irrigated Agriculture in Northern Jordan Valley. *Irrigation and Drainage Systems*. 25 (4): 307-321.

Amayreh, J.A., and M. Al-Dorgham. (2013). Adjusting the Irrigation Water Demand Projection Module to be Viable in Central Jordan Valley. *Irrigation and Drainage Systems*. 25 (4): 347-365.