

# AMMAR A. ALBALASMEH

## Assistant Professor, Environmental Soil Physics

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### EDUCATION

Ph.D. Environmental Soil Physics	University of California, Merced	2009-2013
M.Sc. Natural Resources & Environment	Jordan University of Science and Technology	2005-2008
B.Sc. Soil, Water & Environment	Jordan University of Science and Technology	2001-2005

### PROFESSIONAL POSITIONS

Assistant Dean of Agriculture	Jordan University of Science and Technology	2015- present
Assistant Professor	Jordan University of Science and Technology	2013- present
Teaching Assistant	University of California, Merced	2009-2013
Information point officer	Higher Council for Science and Technology	2008-2009
Teaching Assistant	Jordan University of Science and Technology	2005-2007

### PEER-REVIEWED PUBLICATIONS

#### *Published Papers*

1. Rusan, M.J., **A.A. Albalasmeh**, S. Zuraiqi, and M. Bashabsheh. 2015. Evaluation of Phytotoxicity effect of olive mill wastewater treated by different techniques on seed germination of Barley (*Hordeum vulgare L.*), *Environmental Science and Pollution Research*, 22: 9127-9135.
2. Ghezzehei, T.A. and **A.A. Albalasmeh**. 2015. Spatial distribution of exudates provides built-in water potential gradient for root uptake, *Ecological Modeling*, 298: 53-63.
3. **Albalasmeh, A.A.** and T.A. Ghezzehei. 2014. Interplay Between Soil Drying and Root Exudation in Rhizosheath Development, *Plant and Soil*, 374:739-751.
4. **Albalasmeh, A.A.**, AA Berhe and T.A. Ghezzehei. 2013. A new method for rapid determination of carbohydrate and total carbon concentrations using UV spectrophotometry, *Carbohydrate Polymers*, 97(2): 253-261.
5. **Albalasmeh, A.A.**, M Berli, DS Shafer and T.A. Ghezzehei. 2013. Degradation of moist soil aggregates by rapid temperature rise under low intensity fire, *Plant and Soil*, 362:335-344.
6. Gharaibeh, M.A, N.I. Eltaif, **A.A. Albalasmeh**. 2011. Reclamation of highly calcareous saline sodic soils using Atriplex halimus and by-product gypsum, *International journal of phytoremediation*, 13:873-883.

### **Manuscripts in Review**

1. Rusan, M.J., **A.A. Albalasmeh** and H.I. Malkawi. Olive mill wastewater treated by different technologies: soil quality and plant growth, *Agricultural Water Management*
2. Gharaibeh, M.A., **A.A. Albalasmeh**, M.Z. Alghzawi and T.A. Ghezzehei. Alteration of Physical and Chemical Characteristics of Clayey Soils by Irrigation with Treated Waste Water, *Geoderma*
3. Gharaibeh, M.A., **A.A. Albalasmeh**, B. Marschner and Y. Sleem. Cadmium uptake and translocation of tomato in response to simulated irrigation water containing elevated concentrations of cadmium and zinc in clayey soil, *Water, Air, Soil Pollution*

### **Manuscripts in Preparation**

1. **Albalasmeh, A.A.** and T.A. Ghezzehei. Association of anionic extracellular polymers with sand, *Soil Science Society of America Journal*

### **PROFESSIONAL AFFILIATIONS AND SERVICES**

European Geophysical Union (EGU)	Member since 2013
American Geophysical Union (AGU)	Member since 2012
Soil Science Society of America (SSSA)	Member since 2010
Jordanian Agricultural Engineers Association (JAEA)	Member since 2005

#### **Manuscript reviewer:**

Plant and Soil Journal, *Geoderma*, *Vadoze Zone Journal*, *Soil Science Society of America Journal*, *Jordan Journal of Agricultural Sciences*, *African Journal of Environmental Science and Technology*.

#### **University Service:**

Faculty Adviser, Soil and Irrigation students	2014 class
Student affairs committee at the Faculty of Agriculture	2014 - Now
Curriculum committee at the department of Natural Resources and Environment	2014 - Now
Graduate Studies committee at the department of Natural Resources and Environment	2014 - Now
Scientific research committee at the department of Natural Resources and Environment	2014 - Now
Laboratory Safety Committee at the department of Natural Resources and Environment	2015 - Now

### **TEACHING AND STUDENT ADVISING**

#### **Courses**

- **NR 207:** Plant Earth Problems & Solutions
- **NR 301:** Soil Physics
- **NR 306:** Soil Plant Water Relations
- **NR 340:** Principles of Hydraulics
- **NR 446:** Water Resources

- **NR 701:** Advanced Soil Physics (MS Course)
- **NR 791:** Graduate Seminar (MS Course)

### **Graduate Students (Co-)Advising**

1. **Mohammad Quzaih:** Natural and Environmental Resources MSc student, currently developing a research on the effect of biochar addition on the physical and hydraulic properties of loamy sand soil.
2. **Mohammad Alajlouni:** Natural and Environmental Resources MSc student, currently developing a research on the effect of olive mill wastewater addition on the physical and hydraulic properties of soil.
3. **Enas Hamdan:** Natural and Environmental Resources MSc student, currently developing a research on the effect of Polyacrylamide on Soil Physical and Hydraulic Properties.
4. **Yasmeen A. Saleem:** Graduated with MSc in Environmental Resources, conducted thesis research on *Tomato uptake and responses to simulated irrigation water containing elevated concentrations of cadmium and zinc. 2014*
5. **Ma'in Z. Alghzawi:** Graduated with MSc in Environmental Resources, conducted thesis research on *Modeling water infiltration in soil irrigated with treated wastewater. 2014*

### **HONORS AND AWARDS**

- 2016** Established Scientist's Travel Award, European Geophysical Union (EGU).  
**2013** ES Graduate Program Fellowship Award, University of California, Merced.  
**2012** Spring 2012 Graduate Division Fellowship, University of California, Merced.  
**2012** Graduate Student Summer Fellowship, University of California, Merced.  
**2011** Environmental Systems Graduate Bobcat Fellowship, University of California, Merced.  
**2009** Doctoral Fellowship, University of California, Merced.

### **Research grants**

#### **Awarded: *Internal funding***

- 2015** Effects of temperature and particle size on biochar yield from pyrolysis of agricultural residues  
**A.A. Albalasmeh (PI)** and M.A. Gharaibeh
- 2015** Measuring total carbohydrate in soil using Sulfuric Acid-UV method  
**A.A. Albalasmeh (PI)** and M.A. Gharaibeh
- 2015** Effect of biochar on hydro-physical properties in sandy soils  
**A.A. Albalasmeh (PI)**, M.A. Gharaibeh and M.Z. Quzaih

- 2015** Effect of olive mill wastewater on hydro-physical properties in two contrasting soils  
**A.A. Albalasmeh (PI)**, M.A. Gharaibeh and M.A. Ajlouni
- 2015** Effect of Polyacrylamide on Soil Physical and Hydraulic Properties  
**A.A. Albalasmeh (PI)**, M.A. Gharaibeh and E.H. Hamdan
- 2015** Soil Aggregate formation and Stabilization by Plant Roots and Microorganisms Exudates during Multiple Wetting and Drying Cycles  
**A.A. Albalasmeh (PI)**
- 2014** Modeling Water Infiltration in Soil Irrigated with Treated Wastewater  
M.A. Gharaibeh, **A.A. Albalasmeh (Co-PI)** and M.Z. Alghzawi
- 2014** Tomato uptake and responses to simulated irrigation water containing elevated concentrations of Cadmium and Zinc  
M.A. Gharaibeh, **A.A. Albalasmeh (Co-PI)** and Y.A. Saleem

### Conference Abstracts

1. Ghezzehei, T.A., N Bogie and **A.A. Albalasmeh**. Role of mucilage on uptake and release of water by plant roots. GSA, Baltimore, USA, 1-4 November 2015.
2. Ghezzehei, T.A., N Bogie and **A.A. Albalasmeh**. Plant roots can actively regulate hydraulic redistribution by modifying the hydraulic properties of the rhizosphere using exudates. EGU general assembly, Vienna, Austria, 12-17 April 2015.
3. Gharaibeh, M.A., **A.A. Albalasmeh** and M Alghzawi. Modeling Water Infiltration in Soil Irrigated with Treated Wastewater. EGU general assembly, Vienna, Austria, 12-17 April 2015.
4. Ghezzehei, T.A. and **A.A. Albalasmeh**. Radial reduction profile of root exudates facilitates water uptake. American Geophysical Union (AGU), San Francisco, California, 9-13 December 2013.
5. **Albalasmeh, A.A.** and T.A. Ghezzehei. Implications of radial distribution of organic matter in the rhizosphere to root water uptake. ASA-CSSA-SSSA 77th Annual Meeting, Tampa, Florida, 3-6 November 2013.
6. **Albalasmeh, A.A.** and T.A. Ghezzehei. Soil aggregate formation: the role of wetting-drying cycles in the genesis of interparticle bonding. EGU general assembly, Vienna, Austria, 7-12 April 2013.
7. **Albalasmeh, A.A.** and T.A. Ghezzehei. Rhizosphere water dynamics: role of exudates in mediating water retention and flow characteristics. EGU general assembly, Vienna, Austria, 7-12 April 2013.
8. **Albalasmeh, A.A.**, A.A. Berhe and T.A. Ghezzehei. Association mechanisms of sand with anionic extracellular polysaccharides (EPS). EGU general assembly, Vienna, Austria, 7-12 April 2013.

9. **Albalasmeh, A.A.**, J. Sweet, T. Gebrenegus, T.A. Ghezzehei. Root exudate as major player on soil-water retention dynamics. American Geophysical Union (AGU), San Francisco, California, 3-7 December 2012.
10. **Albalasmeh, A.A.**, T.A. Ghezzehei. Conceptual modeling of the influence of wetting and drying cycles on soil aggregation and stabilization. American Geophysical Union (AGU), San Francisco, California, 5-9 December 2011.
11. **Albalasmeh, A.A.**, M. Berli, D. S. Shafer and T. A. Ghezzehei. Effects of low temperature fire on soil aggregate stability. ASA-CSSA-SSSA 75th Annual Meeting, San Antonio, Texas, 16-19 October 2011.
12. **Albalasmeh, A.A.** and T.A. Ghezzehei. Role of wetting and drying in soil aggregate formation. ASA-CSSA-SSSA 74th Annual Meeting, Long Beach, California, 31 Oct.-4 Nov. 2010.