

Yashar Makhtoumi

Ph.D. Candidate, Department of Civil and Environmental Engineering,
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EDUCATION

2022	Ph.D. Candidate, Civil Engineering	Florida State University
2021	M.Sc., Civil Engineering	Florida State University
2017	M.Sc., Water and Hydraulic Structure Eng.	Amir Kabir University of Tech.
2014	B.Sc., Civil Engineering	University of Shams Gonbad

RESEARCH EXPERIENCE

2022-Present	Land Use Change Impact on Fresh Waters, Application of Remote Sensing and Machine Learning; Focusing on Suspended Sediment in Rivers and lakes (Harmful Algal Bloom)
2021- Present	Cellulose Nanocrystals for Starter Plant Plugs
2020-2022	LiDAR-Based Ecosystem Assessments to Support Innovative Advancements to Water Quality and Grazing Lands Conservation, Funded by USDA-NRCS
2018-2020	“Land Use Change in Response to The Climate Change: Vulnerability Analysis”, Funded by USDA-NIFA (fund no. 2018-68002-27920).
2015-2017	Study of Flow Interaction around Bridge Pier and Abutment in a Fixed Bed. https://drive.google.com/drive/folders/1fge-oqfD9Lc-coauAkZS63S4DzxVs57h?usp=sharing

PEER-REVIEWED PUBLICATION

- 2022, **Makhtoumi, Y.**, Abbasi, A., Seyedmakhtoom, A., Chen, G., Ibeanusi, V., “Topsoil Loss under Extreme Rainfall; Finding Soil Erosion Hotspots using Weather Radar Data”, Science of the Total Environment (submitted)
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4208081#maincontent
- 2020, **Makhtoumi, Y.**, Simeng, L., Chen, G., Ibeanusi, V., “Evaluating Water Balance Variables under Land Use and Climate Projections in the Upper Choctawhatchee River Watershed, in Southeast US”, *Water*. <https://www.mdpi.com/2073-4441/12/8/2205/html>
- 2018, **Makhtoumi, Y.**, Zarrati, A.; Ardeshtir A.; Karami, H.; “Flow Field around a Vertical Abutment”, 16th National hydraulic Conference, Ardebil, University of Mohaghegh Ardabili.
https://drive.google.com/file/d/1SFQYZGd1dNSLa0fRpr1K02nadNEnG8f_/view?usp=sharing

TEACHING EXPERIENCE

Instructor (2021-2020)

Environmental and Hydraulic Eng. Lab, Undergraduate Level
College of Engineering, Florida State University

Co-Instructor (2019)

Design of Water Quality Management Facilities, Graduate Level
College of Engineering, Florida State University

Tutor (2017-present)

English Language and Mathematics, Undergraduate Level

Teaching Assistant (2015)

RS & GIS Application in Civil Engineering & Lab, Graduate Level
Dep. of CEE, Amirkabir University of Technology

Co-Instructor (2014)

Hydraulics & Lab., Undergraduate Level
Dep. of CEE, University of Shams Gonbad

Co-Instructor (2013)

Road Construction., Undergraduate Level
Dep. of CEE, University of Shams Gonbad

Co-Instructor (2012-2014)

Senior Project (Reinforced Concrete Construction Project, Steel Structures Project, Road Construction Project), Undergraduate Level
Dep. of CEE, University of Shams Gonbad

Co-Instructor (2013)

Principles of Dam Engineering, Undergraduate Level
Dep. of CEE, University of Shams Gonbad

Co-Instructor (2012)

Hydrology Engineering, Undergraduate Level
Dep. of CEE, University of Shams Gonbad

PRESENTATIONS

- 2022, **Makhtoumi. Y.**, “Topsoil Loss under Extreme Rainfall Events Using Weather Radar Data”, *Energy Water Food Nexus International Summit*, Florida A&M University, April 12, 2022.
- 2020, **Makhtoumi. Y.**, “Climate Modeling for Better Prediction of Future Water Needs”, Bureau of Water Supply Planning, St. Johns River Water Management District, Florida, Fall 2020
- 2019, **Makhtoumi. Y.**, “Land-Use Changes in Response to Climate Change: A Vulnerability Analysis”, *USDA-NIFA “Climate” Project Team meeting*, Washington State University, Pullman, WA. Aug. 2019.
- 2019, **Makhtoumi. Y.**, “Hydrologic Extremes Modeling in the Upper Choctawhatchee River Watershed”, *EnergyWaterFoodNexus International Summit*, Florida A&M University, Nov. 2019.
- 2018, **Makhtoumi. Y.**, “Land Use change and Vulnerability Analysis”, *Climate and Agroecology Project Directors’ Meeting*, USDA-National Institute of Food and Agriculture, Washington DC, Dec. 2018.
- 2013, **Makhtoumi. Y.**, “Training Workshop on Using SEEP-W Software in Dam Engineering”, University of Shams Gonbad, Gonbad-e Kavus, Golestan, Iran, Fall 2013.
- 2012, **Makhtoumi. Y.**, “Training Workshop on Using HEC-HMS Software in Hydrology”, University of Shams Gonbad, Gonbad-e Kavus, Golestan, Iran, Fall 2012.

INVITED SPEAKS

- 2023, **Makhtoumi. Y.**, “2nd International Meet on Renewable and Sustainable Energy, Rome, Italy, March 13-15, 2023.
- 2022, **Makhtoumi. Y.**, “2nd Global Summit on Civil, Architectural and Environmental Engineering (GSCAEE2022) Copenhagen, Denmark, June 16-18, 2022.

CONFERENCES

- AMS** (American Meteorological Society) 103rd Annual Meeting, Colorado, Denver, Jan. **2023**.
Presentation and Poster, **Makhtoumi. Y.**, “*Topsoil Loss under Extreme Rainfall Events.*”
- AGU** (American Geophysical Union) 2022 Fall Meeting, Illinois, Chicago, Dec. 11-16, **2022**.
Presentation and Poster, **Makhtoumi. Y.**, “*Finding Soil Loss Hotspots Using Weather Radar Data.*”
- Geo for Good Summit**, Google Annual Conference for GEE, virtual, October 4-6, **2022**.
- GCSHE**, Global Conference on Sustainability in Higher Education: The Urgency of Now, AASHE, Florida State University, Tallahassee, Florida, Oct. 18, 26, Nov. 3, **2022**
- MSCAR** (Midwest Students Conference on Atmospheric Research) 6th Annual Meeting, virtual, October 1-2, **2022**.
- EWFN** (Energy Water Food Nexus) International Summit, Florida A&M University, April 12, **2022**.
Presentation, **Makhtoumi. Y.**, “*Regional Trends in Climate Change Research and Enterprise.*”
- EWFN** (Energy Water Food Nexus) International Summit, Florida A&M University, November 7, **2019**
Presentation, **Makhtoumi. Y.**, “*Socio-Environmental Watershed Modeling.*”
- USDA-NIFA** (National Institute of Food and Agriculture), Climate and Agroecology Project Directors’ Meeting, Poster, **Makhtoumi. Y.**, “*Land Use change and Vulnerability Analysis*”, Washington DC, Dec. **2018**.

PROFESSIONAL SERVICE

Journal Reviewer: *Journal of Geophysical Research: Biogeosciences (JGRB)*

HONORS AND AWARDS

- Received **Research Excellence Award** (\$1000), Florida State University, Fall **2022**
- Member of **Golden Key International Honour Society**, Fall **2020**
- Received **Adelaide Wilson Scholarship** (\$1000), Florida State University, Spring **2020**.
- Received **3 years Research Assistantship** from FSU, College of Engineering, **2019**
- Government Graduate Full Scholarship**, Amir Kabir University of Technology, Iran **2014–2017**.
- Ranked 3rd** in master’s program, Dep. Of CEE, Amir Kabir University of Technology, Iran, **2017**.
- Best Thesis and Best Presentation** in the master’s program, Amir Kabir University of Technology, Iran, **2017**.
- Ranked 432nd** among more than 40,000 participants in nationwide university entrance exam for graduate studies (M.Sc. program), February **2014**.
- Honored as a successful alumnus**, University of Shams Gonbad, Golestan, Iran, September **2014**.
- Ranked 2nd** in the undergraduate program, **2014**.
- 4th GPA level** in the history of the Dep. of CEE, University of Shams Gonbad, Golestan, Iran, **2014**.
- Received **Talented Student award** during the undergraduate program, **2013**.

MEMBERSHIPS

- Member of **AGU** (American Geophysical Union)
- Member of **AMS** (American Meteorological Society)
- Member of Iranian hydraulic Association (IHA)
- Member of Iranian Water Resources Association (IR-WRA)
- Member of FANAB (Amirkabir University of Technology’s **Water Technology Center**)

PROFESSIONAL EXPERIENCE

Consulting Engineer,

MAHAB GHODSS Consulting Engineering Co., Iran, Summer **2014**.

Consulting Engineer

Pournam Co., Iran, Winter, and Spring **2014**.

SELECTED SKILLS

Programming Language: Python, R, MATLAB, C++

Software/Modeling: Google Earth Engine, Linux, SWAT, QSWAT+, SWAT-CUP, NWM, GIS, QGIS, ILWIS (GIS & RS), HEC-RAS, HEC-HMS, SEEP-W, Flow 3D, Tecplot EX, AutoCAD, WinADV

Flying drones for data collection such as **LiDAR**

Certificates

GIS Modeler, 2019, ESRI

NASA Training Certificate, Monitoring and Modeling Floods using Earth Observations, 2022

NASA Training Certificate, Satellite Remote Sensing for Measuring Urban Heat Islands and Constructing Heat Vulnerability Indices, 2022