

Amr Keshta, **PhD**

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<https://scholar.google.com/citations?hl=en&user=MzPnesYAAAAJ>
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Research interests

Global Warming – Geographical Information Systems GIS – Environmental Science - Sea level rise - Remote sensing – Carbon sequestration – Soil Carbon stocks – Hydrology - Hydrodynamics - Carbon and Nitrogen cycling – Greenhouse Gas Emissions – Climate Change – Forest and wetlands ecosystems – Urban Ecosystems - ArcGIS modeling and large data sets processing.

Software skills

- Programmer (SAS) – since 2006 until now.
- Programmer (SQL) – since 2017 until now.
- Geographical Information System (GIS) ArcGIS – Since 2015 until now.
- Satellite image analysis - Remote Sensing Platform - (ENVI) – Since 2013 until now
- Learning R and Python

Field experiences and sensors measurement

- Measuring accretion rates in coastal wetlands since 2013 until now
- Wetland creation and restoration since 2013 until now
- Wetland delineation since 2013 until now
- Ecologist since 2006 until now
- Setup field and lab experiments since 2006 until now
- Gas flux measurements in field and Lab since 2014 until now
- LI-COR soil and gas flux measurements since 2016 until now
- Gas Chromatography and MS since 2014 until now
- Soil biogeochemistry sensors including salinity, pH, soil redox, ..etc since 2006 until now
- Vegetation composition and phytosociology since 2006 until now

Academic appointments

University of Maryland – USA - College of Agricultural and Natural Resources
Lecturer - Department of Environmental science and technology – January 2018 until May 2018
Research assistant - Department of Environmental science and technology - since 2015 until now
Visiting Scholar – Department of Environmental science and technology, 2013-2015
University of Hamburg, Germany – Department of Applied Plant Ecology
Wetland ambassador fellow – applied plant ecology department - October to December 2017.
University of Tanta – Egypt – College of Science
Assistant lecturer - Botany Department – 2011 - 2013
Teaching assistant - Botany Department – 2007 – 2010

Education

University of Maryland – USA
PhD candidate – and graduating Fall 2017.

	<p>Dissertation: Hydrology, Soil Redox, and Pore-water Iron Regulate Carbon Cycling in Natural and Restored Tidal Freshwater Wetlands in The Chesapeake Bay, Maryland, USA.</p> <p>University of Tanta - Egypt M.S. Environmental Science – College of Science - 2011 B. S. Botany - College of Science – 2006</p>
Mentorship	<p>As a research assistant, I supervised undergraduate, high school students, and lab technician during summer 2014, 2015, 2016, and 2017.</p>
Honors, awards, fellowships, and distinctions	<ul style="list-style-type: none">• Wetland Ambassador fellowship (\$5000). Society of Wetland Scientist. http://www.sws.org/Awards-and-Grants/wetland-ambassadors-graduate-research-fellowship.html• Goldhaber travel award (\$400), Graduate School, University of Maryland, College Park, USA.• Scholarship from Sustainable Energy Fund (\$1000) towards Energypath 2017, for our future: Carbon Reduction.• Travel award (\$1400) from The Wetland Foundation.• First place at poster competition presented at College of Agricultural and Natural Resources (AGNR) open house 2016.• Travel award (\$995) from Global Change Section, Mid-Atlantic Chapter, Society of Wetland Scientist (SWS).• Travel award (\$300) for the second place poster at Graduate research appreciation day (GRAD), 2016. Hosted by University of Maryland, College Park, MD, USA.• International Graduate Research Fellowship (IGRF), Graduate school, University of Maryland College Park, USA. (\$4000 in 2014, 2015, 2017)• Student Promotion Award of the Faculty of Science, Tanta University, Egypt.• Student Promotion Award of the Egyptian Syndicate of Scientific Professions, Tanta University, Egypt.
Publications In preparation and or under review	<p><u>Peer reviewed articles</u></p> <ul style="list-style-type: none">• Sediment clays are trapping heavy metals in urban lakes: an indicator for severe industrial and agricultural influence on coastal wetlands at the Mediterranean coast of Egypt (Under Revision: Marine Pollution Bulletin)• Soil Redox and Hydropattern are controlling Soil Carbon Stocks in Natural and Restored Tidal Freshwater Wetlands in a Sub-estuary of the Chesapeake Bay. In preparation (90-95% completed)• A Novel Method to Assess Soil Organic Matter Decomposition and Carbon Stability in Natural and Restored Wetlands. In preparation (90-95% completed)• Pore-water Iron and diurnal methane fluxes control carbon cycling in natural and restored freshwater wetlands. In preparation (90% completed).• The impact of above and below ground biomass on Carbon cycling in freshwater wetlands. (80% completed).
2017	<ul style="list-style-type: none">• Eid, E.M., Keshta, A.E., Shaltout, K.H., Baldwin, A.H., El-Din, S., Ahmed, A., 2017. Carbon sequestration potential of the five Mediterranean lakes of Egypt. <i>Fundamental and Applied Limnology/Archiv für Hydrobiologie</i> 190(2), 87-96.

**Other
publications
2011**

- Radford, E.A., Catullo, G. and Montmollin, B. de. (eds.) (2011). Important Plant Areas of the south and east Mediterranean region: priority sites for conservation. IUCN, Gland, Switzerland and Malaga, Spain. Gland, Switzerland and Malaga, Spain: IUCN. VIII + 108 pp. Contributor in the Egyptian section.
- Kamal H. Shaltout, Mohamed A. El-Beheiry, Hassan F. El-Kady and Amr E. Keshta (2011). Distribution of the naturalized species *Dalbergia sissoo* Roxb. ex DC. in Nile Delta, Egypt. *Taekholmia* 30: 121-141.
- Kamal H. Shaltout & Amr E. Keshta (2011). THE BIOLOGY OF EGYPTIAN WOODY PERENNIALS 4. *Dalbergia sissoo* Roxb. ex DC. *Ass. Univ. Bull. Environ. Res. (Review article)* 14 (2): 131-153.

2010

- Kamal H. Shaltout, Hassan F. El-Kady, Mohamed A. El-Beheiry and Amr E. Keshta. Growth behavior of the invasive species *Dalbergia sissoo* Roxb. ex DC. in Nile Delta, Egypt. *Proceeding in 6th International Conference on Biological Science, Faculty of Science-Tanta University, Tanta-Egypt (10-11 November 2010) (Botany)*6, 58-71.

**International
conferences
and
presentations**

2017

- Day-night variation in methane flux from natural and restored tidal freshwater wetlands in a Chesapeake Bay tributary, USA. Coastal Ecology Workshop – Netherlands – October 2017 Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Talk.
- Do wetland soils emit or sequester carbon? A novel method to assess carbon sequestration rate in natural and restored tidal freshwater wetlands. ESA annual meeting – Portland, Oregon. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Talk.
- Effect of Hydro-geomorphology on Soil Carbon Stocks in Natural and Restored Tidal Freshwater Wetlands in a Sub-estuary of the Chesapeake Bay. SWS annual meeting – San Jaun, Puerto Rico. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Talk.
- Day-night variation in methane flux from natural and restored tidal freshwater wetlands in a Chesapeake Bay tributary. MA-ESA annual meeting - New Jersey. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Talk.

2016

- Soil carbon stocks for natural and restored tidal fresh-water wetlands in a Chesapeake Bay tributary. ENST poster symposium December 2016. Victoria Monsaint-Queeney, Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Poster.
- Hydropatterns of natural and restored tidal fresh-water wetlands in a Chesapeake Bay tributary. College of Agricultural and natural resources open house, Clarksville MD USA. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Poster.
- Hydropatterns of natural and restored tidal fresh-water wetlands in a Chesapeake Bay tributary. MEES research colloquium, University of Maryland College Park, MD USA. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Poster.

- 2016 Patuxent River conference. Do wetland soils emit or sequester carbon? A new approach to assess total soil carbon in natural and restored tidal freshwater wetlands. Maryland, USA. Josh Gaimaro, Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin Talk
 - Above ground biomass and plant carbon stock in natural and restored tidal fresh water wetlands. Society of Wetland Scientist (SWS) annual meeting 2016. Texas, USA. Amr E. Keshta, Stephanie Yarwood, Andrew H. Baldwin. Poster.
 - Society of Wetland Scientists (SWS) Annual International Meeting., Corpus Christi, Texas. 2016. Hydrology? Check! Plants? Check! Soil organic matter? Houston, we have a problem! Baldwin, A.H., S.A. Yarwood, M. Gonzalez Mateu, A. Keshta, E. McFarland, C. Prasse.
- 2015**
- Above ground biomass and plant carbon stock in natural and restored tidal fresh water wetlands. Graduate research appreciation day (GRAD). Hosted by University of Maryland, College Park, MD, USA. Poster.
- 2014**
- Carbon Sequestration potential for Burullus lake, Egypt. 2014 Annual Conference Mid-Atlantic Chapter Ecological Society of America (MA-ESA). Hosted by University of Maryland, College Park, MD, USA. Poster.
 - The Sixth International Conference on Biological Sciences. Faculty of Science-Tanta University, Tanta-Egypt (10-11 November 2010). Trainer, Participant and organizer.
 - 2nd International Conference for Enhancing Scientific Research: Innovation & Development, Tanta University, Tanta, Egypt (4-5 March 2009) Participant and organizer.
 - Conference of Bioremediation of Environmental Pollution. Faculty of Science-Tanta University, Tanta-Egypt (22 December 2008). Participant and organizer.
 - The Fifth International Conference on Biological Sciences. Faculty of Science-Tanta University, Tanta-Egypt (5-6 November 2008). Participant and organizer.
 - International Conference for Enhancing Scientific Research: New Horizons, Tanta University, Tanta, Egypt (20-21 February 2008) Participant and organizer.
 - The Fourth International Conference on Biological Sciences. Faculty of Science-Tanta University, Tanta-Egypt (1-2 November 2006). Participant and organizer.
- Workshops
2010-2017**
- Spatial Analysis for GIS (Geographical Information System) ArcGIS Desktop 10.1 -University of Maryland, College Park, USA Attendant.
 - Data Management for GIS (Geographical Information System) using ArcGIS Desktop 10.1 - University of Maryland, College Park, USA Attendant.
 - Introduction to GIS (Geographical Information System) using ArcGIS Desktop 10.1 - University of Maryland, College Park, USA. Attendant.
 - Workshop on Multivariate Analysis and Its Biological Applications at Sixth International Conference on Biological Sciences. Faculty of Science-Tanta University, Tanta-Egypt (11 November 2010). Trainer.
 - Workshop on Statistical Analysis and Its Biological Applications at Egyptian Syndicate of Scientific Professions, Faculty of Science-Tanta University, Tanta-Egypt. (2-3 August 2010). Trainer, Trainer and Participant.
 - Workshop on the Construction of Vegetation Data Bank, Analysis and Classification of Ecological Data using TURBOVEG Software. Ecological research unit, Botany department, Faculty of Science-Tanta University, Tanta-Egypt (25-26 November 2008). Participant and organizer.

Teaching

- Workshop on the Statistical Analysis and Experimental Design for the Biological and Agricultural Sciences using SAS software. Atomic Energy Authority (A.E.A), Nasr City, Cairo, Egypt (20-31 January 2008). Participant.

University of Maryland – USA

Department of Environmental Science and Technology - USA
ENST 452 - Wetland Creation and Restoration - Fall 2018

Tanta University – Egypt

Botany Department – College of Science – Undergraduate levels

Basics principals of plant anatomy – 2007 until 2013

Introduction to plant morphology 2007 until 2013

Plant taxonomy and systematics - 2007 until 2013

Basic aspects of plant physiology - 2007 until 2013

Ecology program – College of Science - Undergraduate levels

Physical and chemical soil properties - 2007 until 2013

Basics of Plant Ecology - 2007 until 2013

Vegetation structure and plant phytosociology - 2007 until 2013

Vegetation flora and taxonomy - 2007 until 2013

Ecology master program - College of Science - graduate levels

Basic concepts of experimental design and statistical analysis 2010 until 2013

Service and scientific communities

- Good neighbor day 2017– University of Maryland – College Park – sentinel swamp sanctuary
- Maryland day - University of Maryland – College Park 2013, 2014, 2015, 2016, and 2017
- Maryland 4H youth development – University of Maryland Extensions – 2015

Invited Journal Reviewer Referees

Aquatic Botany

University of Maryland – USA

Prof. Andrew Baldwin

PI - Research and Teaching reference - Department of Environmental Science & Technology (ENST). e-mail: baldwin@umd.edu, Tel.: 001 301-405-7855

Prof. Stephanie Yarwood

CO-PI - Research and work reference - Department of Environmental Science & Technology. e-mail: syarwood@umd.edu, Tel.: 001 301-405-1345

Prof. Michael Kearney

Research and work reference - Department of Environmental Science & Technology, e-mail: kearneym@umd.edu, Tel.: 001 301-405-4057

Prof. Martin Rabenhorst

Research and work reference - Department of Environmental Science & Technology, e-mail: mrabenho@umd.edu, Tel.: 001 301-405-1343

University of Hamburg – Germany

Prof. Kai Jensen

Research reference – Department of Applied Plant Ecology
email: kai.jensen@uni-hamburg.de, Tel.: +49 40 42816-576