CV – June 2016

Karim Alizad

Department of Civil, Environmental & Construction Engineering
University of Central Florida
4000 Central Florida Blvd.
Orlando, FL 32816

Phone: (951) 315-9824
Fax: (407) 823-3315
Email: kalizad@knights.ucf.edu
Website: www.karimalizad.com/

Education

University of Central Florida - Orlando, FL, United States of America
PhD – Civil Engineering, 2016

University of California, Riverside – Riverside, CA, United States of America
Master of Science – Mechanical Engineering, 2011

University of Tehran – Tehran, Iran
Master of Science – Energy Conversion, 2008

Semnan University– Semnan, Iran
Bachelor of Science - Mechanical Engineering, 2005

Research Experience

2011-2016 **CHAMPS Lab** (http://champs.cecs.ucf.edu)
University of Central Florida

- Using Climate Models (GCM & RCM) Data for Hydrological Projections
- Hydrodynamic and Sediment Transport Projections Using SLR and Climate Data
- Field work Data Collection (RTK Surveying & Bio-Assay Plant and Harvest)
- Developing Hydro-MEM Model

2009-2011 **Heat and Mass Transfer Research Lab** (http://www.engr.ucr.edu/~vafai/)
University of California, Riverside

- Thermal Performance of Flat-Shaped Heat Pipes Using Nanofluids
- Take Part in Plum Rise Measurement Assessment with Dr. Princevac group

2006-2009 **VFE Research Institute** (www.vferi.com)
University of Tehran

- One-Dimensional Non-Homentropic Numerical Simulation of Engine

Teaching Experience

2012-2014 UCF COMPASS Program (http://compass.ucf.edu/), University of Central Florida (UCF)

2012-2013 UCF Excel Program (https://ssl.excel.ucf.edu/), University of Central Florida (UCF)

2011 Heat Transfer, Teaching Assistant, University of California, Riverside (UCR)
Mechanical Engineering Modeling and Analysis, Teaching Assistant, UCR

2010 Transport Phenomena, Teaching Assistant, UCR
Mechanical Engineering Modeling and Analysis, Teaching Assistant, UCR

2008 Computational Fluid Dynamics II, Teaching Assistant, University of Tehran
Advanced Engineering Mathematics, Teaching Assistant, University of Tehran

Journal Articles

Alizad, K., Hagen, S.C., Morris, J.T., Medeiros, S.C., Bilskie, M.V. (2016), "Coastal Wetland Response to Sea Level Rise in a Fluvial Estuarine System," ***Earth's Future***, Special Issue on Integrated Field Analysis & Modeling of the Coastal Dynamics of Sea Level Rise in the Northern Gulf of Mexico, *(under review)*

Alizad, K., Hagen, S.C., Morris, J.T., Bacopoulos, P., Bilskie, M.V., Weishampel, J.F., Medeiros, S.C. (2016), "A Coupled, Two-Dimensional Hydrodynamic-Marsh Model with Biological Feedback," ***Ecological Modeling***, Vol. 327, pp. 29-43, http://dx.doi.org/10.1016/j.ecolmodel.2016.01.013

Bilskie, M.V., Hagen, S.C., **Alizad, K.**, Medeiros, S.C., Passeri, D.L., Needham, H., Cox A., (2016), "Dynamic Simulation and Numerical Analysis of Hurricane Storm Surge Under Sea Level Rise along the Northern Gulf of Mexico," ***Earth's Future***, http://dx.doi.org/10.1002/2015EF000347

Passeri, D.L., Hagen, S.C., Plant, N.G., Bilskie, M.V., Medeiros, S.C., **Alizad, K.** (2016), "Tidal Hydrodynamics Under Future Sea Level Rise and Coastal Morphology in the Northern Gulf of Mexico," ***Earth's Future***, http://dx.doi.org/10.1002/2015EF000348

Hovenga, P.A., Wang, D., Medeiros, S.C., Hagen, S.C., **Alizad, K.** (2016), "The Response of Runoff and Sediment Loading in the Apalachicola River, Florida to Climate and Land Use Land Cover Change," ***Earth's Future***, http://dx.doi.org/10.1002/2015EF000348

Passeri, D.L., Hagen, S.C., Bilskie, M.V., **Alizad, K.**, Wang, D. (2015), "The Dynamic Effects of Sea Level Rise on Low Gradient Coastal Landscapes: a Review," ***Earth's Future***, http://dx.doi.org/10.1002/2015EF000298

Chen, X., **Alizad, K.**, Wang, D., Hagen, S.C. (2014), "Climate Change Impact on Runoff and Sediment Loads to the Apalachicola River at Seasonal and Event Scales," ***Journal of Coastal Research***, Special Issue, No. 68, pp. 33-42. http://dx.doi.org/10.2112/SI68-005.1

Alizad, K., Bilskie, M.V., Passeri, D. (2013), "Integrated Modeling of Hydrodynamics and Marsh Evolution under Sea Level Rise in Apalachicola, FL," ***Florida Watershed Journal***, *summer 2013*

Wang, D., Hagen, SC., **Alizad, K.** (2013), "Climate Change Impact and Uncertainty Analysis of Extreme Rainfall Events in the Apalachicola River Basin, Florida," ***Journal of Hydrology***, Vol. 480, No. 0, pp. 125-135. http://dx.doi.org/10.1016/j.jhydrol.2012.12.015

Alizad, K., Vafai, K. and Shafahi, M. (2012). "Thermal Performance and Operational Attributes of the Startup Characteristics of Flat-Shaped Heat Pipes Using Nanofluids," ***International Journal of Heat and Mass Transfer***, Vol. 55, No. 1–3, pp. 140-155. http://dx.doi.org/10.1016/j.ijheatmasstransfer.2011.08.050

Conference Proceedings

Mohsenian, H., Ghadamian, H., Hamidi, A. A., **Alizad, K.** (2015). "Open Expansion Tank, Structural Reconstruction with Re-Engineering Considerations and Energy Loss Minimization," ***Proceedings of the ASME 2015 Power and Energy Conversion Conference***, *PowerEnergy2015, San Diego, CA*

Esfahanian, V., **Alizad, K**., Salavatizadeh, A. and Ramezani, M. (2009). "Numerical 1-D Simulation of Internal Combustion Engines considering Entropy Level Changes," ***Proceeding of The sixth International Conference on Internal Combustion Engines***, *Tehran, Iran*

Esfahanian, V., Ramezani, M**.,** Salavatizadeh, A. and **Alizad, K**. (2009), "Simulation of Diesel Engine Cycle Using Multi-Zone Spray and Stoichiometric Combustion," (In Farsi) ***Proceeding of The sixth International Conference on Internal Combustion Engines***, *Tehran, Iran*

Conference Presentations (Oral)

Hagen, S.C., **Alizad, K.**, Bilskie, M.V., Hovenga, P., Medeiros, S.C., Passeri, D., Wang, D. (2015), "As the Sea Level Rises the Earth does not Stand Still," *AGU 2015 Fall Meeting, San Francisco, CA*

Bilskie, M.V., Hagen, S.C., Passeri, D., **Alizad, K.**, Medeiros, S.C., Irish, J. (2015), "A Dynamic Flood Inundation Model Framework to Assess Coastal Flood Risk in a Changing Climate," *AGU 2015 Fall Meeting, San Francisco, CA*

Passeri, D., Hagen, S.C., Plant, N., Bilskie, M.V., Medeiros, S.C., **Alizad, K.** (2015), "Tidal Hydrodynamics Under Future Sea Level Rise Scenarios with Coastal Morphology along the Northern Gulf of Mexico," *AGU 2015 Fall Meeting, San Francisco, CA*

Mohsenian, H., Ghadamian, H., Hamidi, A. A., **Alizad, K.** (2015). "Open Expansion Tank, Structural Reconstruction with Re-Engineering Considerations and Energy Loss Minimization," ***Proceedings of the ASME 2015 Power and Energy Conversion Conference***, *PowerEnergy2015, San Diego, CA*

Bilskie, M.V., Hagen, S.C., Passeri, D.L., **Alizad, K.**, Medeiros, S.C., Coggin, D., Irish, J.L., Plant, N., Cox, A., Kaiser, C. (2015). "Tide, Wind-Wave & Hurricane Storm Surge Modeling in the Northern Gulf of Mexico under Climate Change," *2015 ASCE Louisiana Section Spring Conference, Baton Rouge, LA*

Alizad, K., Gholizadeh, S. (2015), "A Lesson Plan on Oil Spill Solutions," *2015 Florida Engineering Education Conference (FEEC 2015), Orlando, FL*

Hagen, S.C., Passeri, D., Bilskie, M.V., **Alizad, K.** (2014), "On the Coastal Dynamics of Sea Level Rise in the Northern Gulf of Mexico," *Eleventh International Conference on Hydroscience and Engineering (ICHE2014), Hamburg, Germany*

Passeri, D., Hagen, S.C., Bilskie, M.V., **Alizad, K.** (2014), "Influence of Sea Level Rise on Tidal Hydrodynamics in a Fluvial Estuary, a Marine Estuary and a Mixed Estuary: Comparison of Past, Peresent, and Future Conditions," *Eleventh International Conference on Hydroscience and Engineering (ICHE2014), Hamburg, Germany*

Alizad, K., Hagen, S.C., Morris, J.T., Bilskie, M.V., Passeri, D. (2014), "Biomass Productivity Response to Sea Level Rise in a Marine Dominated Estuary," *Young Coastal Scientists and Engineers Conference (YCSEC 2014), Newark, DE*

Alizad, K., Hagen, S.C., Morris, J.T., Bilskie, M.V., Passeri, D. (2014), "Biomass Productivity Response to Sea Level Rise in Two Distinct Saltwater Marshes," *The 34th International Conference on Coastal Engineering (ICCE 2014), Seoul, South Korea*

Morris, J.T., Hagen, S.C., Medeiros, S.C., Weishampel, J.F., Edwards, J., **Alizad, K.** (2013), "Forecasting Current and Future Carbon Stock in Gulf Coast Estuaries," *AGU 2013 Fall Meeting, San Francisco, CA*

Alizad, K., Chen, X., Hagen, S.C., Wang, D. (2013), "Assessment of Present and Future Rainfall-Runoff and Sediment Loading in Apalachicola River Basin," *Thirteenth Estuarine & Coastal Modeling Conference (ECM 2013), San Diego, CA*

Hagen, S.C., Morris, J.T., Bacopoulos, P., **Alizad, K.** (2013), "Sensitivities of a Coupled Model for Biomass Production and Marsh Accretion with Considerations of Sea Level Rise," *Thirteenth Estuarine & Coastal Modeling Conference (ECM 2013), San Diego, CA*

Alizad, K., Hagen, S.C., Wang, D., Daranpob, A. (2013), "Assessment of Present and Future Rainfall-Runoff in Apalachicola River Basin," *29th Annual Water Resources Seminar, EWRI 2013, Orlando, FL*

Alizad, K., Hagen, S.C., Wang, D., Daranpob, A. (2012), "Present and future Apalachicola River flow study using WASH2D numerical model," *Tenth International Conference on Hydroscience and Engineering (ICHE2012), Orlando, FL*

Esfahanian, V., **Alizad, K**., Salavatizadeh, A. and Ramezani, M. (2009). "Numerical 1-D Simulation of Internal Combustion Engines considering Entropy Level Changes," ***Proceeding of The sixth International Conference on Internal Combustion Engines***, *Tehran, Iran*

Esfahanian, V., Ramezani, M**.,** Salavatizadeh, A. and **Alizad, K**. (2009), "Simulation of Diesel Engine Cycle Using Multi-Zone Spray and Stoichiometric Combustion," (In Farsi) ***Proceeding of The sixth International Conference on Internal Combustion Engines***, *Tehran, Iran*

Conference Presentations (Poster)

Alizad, K., Hagen, S.C., Morris, J.T., Medeiros, S.C., Bilskie, M.V., Passeri, D., (2015), "Coastal Marsh Response to Rising Sea Levels in the Grand Bay, MS Estuary," *AGU 2015 Fall Meeting, San Francisco, CA*

Demissie, H., Bilskie, M.V., Hagen, S.C., Morris, J.T., **Alizad, K.** (2015), "Assessing the Effects of Sea Level Rise on Plum Island Estuary Marshes Using a Hydrodynamic-Marsh Modeling Tool," *AGU 2015 Fall Meeting, San Francisco, CA*

Alizad, K., Hagen, S.C., Morris, J.T., Bilskie, M.V., Passeri, D., Medeiros, S.C. (2014), "Coastal Wetland Response to Sea Level Rise in a Marine and Fluvial Estuarine System," *AGU 2014 Fall Meeting, San Francisco, CA*

Bilskie, M.V., Hagen, S.C., Passeri, D., **Alizad, K.** (2014), "Assessment of Coastal Flood Risk in a Changing Climate along the Northern Gulf of Mexico," *AGU 2014 Fall Meeting, San Francisco, CA*

Alizad, K., Hagen, S.C., Morris, J.T., Bacopoulos, P. (2013), "A Hydro-Marsh Equilibrium Model for Marsh System Response to Sea Level Rise," *AGU 2013 Fall Meeting, San Francisco, CA*

Stephen, S.H., Hagen, S.C., , **Alizad, K.**, Batten, B., Bilskie, M.V., DeLorme, D.E., Huang, W., Leslie, M., Morris, J.T., Passeri, D., Ruple, D., Sparks, J., Thomas, A., Solomon, J., Walters, L., Wang, D., Weishampel, J.F., Yeh, G. (2013), "The Coastal Dynamics of Sea Level Rise: A Case Study in the Northern Gulf of Mexico," *Sea Level Rise Summit 2013, Fort Lauderdale, FL*

Alizad, K., Chen, X., Hagen, S.C., Wang, D. (2013), "Assessing Climate Change Impact on Runoff at the Seasonal and Event Scales in the Apalachicola River Basin," *Coastal Hazards Summit 2013, St. Augustine, FL*

Alizad, K., Wang, D., Alimohammadi, N., Hagen, S.C. (2012), "Climate Change Impact on the Annual Water Balance in the Northwest Florida Coastal," *AGU 2012 Fall Meeting, San Francisco, CA*

Weishampel, J.F., **Alizad, K.**, Angelo, J.J., Bacopoulos, P., Bilskie, M.V., Daranpob, A., Hagen, S.C., Medeiros, S.C., Morris, J.T., Passeri, D., Smar, D.E. (2012), "Application of Remote Sensing for Parameterization and Validation of a Coupled Hydrodynamic–Marsh Equilibrium Model for the Coastal Landscape of the Northern Gulf of Mexico," *AGU 2012 Fall Meeting, San Francisco, CA*

Invited Presentations

Alizad, K., Hagen, S. C., Medeiros, S. C. (2015), "Integrated Modeling of Hydrodynamics and Marsh Evolution under Sea Level Rise in Apalachicola, FL," Acada Talks, University of Central Florida, September 11, 2015

Alizad, K., Hagen, S. C. (2014), "Hydro-marsh modeling for the Grand Bay, Weeks Bay, and Apalachicola NERRs," *Elks Lodge #286, Ocala, FL*, August 15, 2014

Alizad, K. (2013), "Research Applications of Topographic Surveying," *Engineering Measurement Course talk, University of Central Florida*, April 4, 2013

Workshop Presentations

Alizad, K., Hagen, S. C. (2015), "Hydro-marsh modeling for the Grand Bay, and Apalachicola NERRs," EESLR-NGOM Management Committee Workshop, Grand Bay, MS, July 28, 2015

Alizad, K., Hagen, S. C. (2014), "Hydro-marsh modeling for the Grand Bay, Weeks Bay, and Apalachicola NERRs," EESLR-NGOM Management Committee Workshop, Apalachicola, FL, July 17, 2014

Alizad, K., Hagen, S. C. (2013), "Assessment of present and future rainfall-runoff in the Apalachicola River Basin," EESLR-NGOM Management Committee Workshop, Georgetown, SC, March 7, 2013

Honors & Awards

Graduate Dean Dissertation Completion Award, University of Central Florida, 2015-2016

Outstanding Contributor to IAHR Student Chapter at UCF, Builders of the Realm, Civil, Environmental, and Construction Engineering Department, University of Central Florida, 2014-2015

ASCE Water Resources Technical Group Award, University of Central Florida, 2012-2013, 2013-2014

Frank Hubbard Engineering Award, University of Central Florida, 2012-2013

Elizabeth S. Lampp Trust and Estate Award, University of Central Florida, 2011-2012

Outstanding Teaching Award, University of California, Riverside, 2010-2011

Graduate Division Fellowship Award, University of California, Riverside, 2009-2011

Outstanding Contributor to ISME Conference, University of Tehran, 2009

Referee / Reviewer Services

Journal of Sustainable Cities and Society

Journal of Hydrogeology and Hydrologic Engineering

Journal of Computational Water, Energy, and Environmental Engineering

Journal of Water Resources Planning and Management

Journal of Modeling and Simulation in Engineering

Journal of Advances in Mechanical Engineering

Attended Workshops

Real Time Kinematic GPS Surveying, University of Central Florida, 2015

Grantsmanship Series Workshop, University of Central Florida, 2015

Preparing Tomorrow's Faculty Series Workshop, University of Central Florida, 2014

Linux/Unix Basics for HPC, TACC online training, 2014

ADCIRC + SMS Bootcamp, Vicksburg, MS, 2012

Aero Acoustic Numerical Simulation, University of Tehran, 2009

Extracurricular Activities

President and **Founder** of the International Association of Hydro-Environmental Engineering and Research (IAHR) Student Chapter at University of Central Florida, 2013-2015

Treasurer Officer of Graduate Student Association (GSA), UCF, 2012-2013

Advisory Board Committee Member of Graduate Student Association, 2012-present

Member of UCF Graduate Community Advisory Panel Committee, 2012-2014

Member of UCF Alumni Association (4ever Knights), 2012-present

International Student Affairs Officer of GSA, UCR, 2010-2011

Member of International Education Committee of Academic Senate, UCR, 2010-2011

Organizational Memberships

International Association for Hydro-Environmental Engineering and Research (IAHR), 2013-Present

Costs, Oceans, Ports, & River Institute (COPRI), 2012-Present

American Geophysical Union (AGU), 2011-Present

American Society of Civil Engineers (ASCE), 2011-Present

American Society of Mechanical Engineers (ASME), 2010-Present

Association for the Science of Limnology and Oceanography (ASLO), 2015

Computer Skills

Operating Systems	Windows, Linux
Programming Languages	FORTRAN, Python, C/C++
Engineering Software	Advanced CIRCulation (ADCIRC), Surface Water Modeling System (SMS) ArcGIS, SWAT, WASH 2D, Fluent, Gambit, MATLAB
General Software	Microsoft Office, Cygwin, FigureGen, Global Mapper, VIM, La Tex

Sports

- Black Belt in Karate (KAN-ZEN-RIO) from Iran Karate Federation- Sept 2000
- Swimming (Member of UCF 100 mile swimming club)