

# Grzegorz "Gregory" Kakareko

Civil and Environmental Engineering  
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## EDUCATION

<b>Ph.D. Florida State University</b> Dissertation: Multi-Scale Loss Estimation of Buildings Subjected to Hurricanes	May 2015 - November 2019 Civil Engineering
<b>M.S. Florida State University</b> Thesis: Land Use Land Cover Classification Based on Convolutional Neuron Networks	May 2015 - November 2019 Computer Science
<b>M.S. Warsaw University of Technology</b> Thesis: Effective Stiffnesses of Plates of Repetitive Structure	October 2013 - March 2015 Civil Engineering (Theory of Structures)
<b>B.S. Warsaw University of Technology</b> Thesis: Dynamic Analysis of the Footbridge Considering Different Dampers Solutions	October 2009 - July 2013 Civil Engineering (Constructions)

## PROFESSIONAL EXPERIENCES

<b>Data Scientist, Risk Management Solutions, HWind Tallahassee</b> I was responsible for the following tasks: development of the HWind products, global weather data collection, maintenance and development of the HWind database, development of the web applications, and maintenance of the HWind servers. Majority of the products were created in Python and PSQl.	July 2017 - Present
<b>Research Assistant, Florida State University</b> During my Ph.D. I worked in many prestigious projects, including the NSF and NOAA sea grant. During that time, I had a chance to combine the knowledge from engineering and computer science departments. The best description of my duties as the research assistant is the work that was published during my Ph.D.	May 2015 - Present
<b>Instructor, Warsaw University of Technology</b> I had a pleasure to teach the Computer Engineering Graphics class in Warsaw University of Technology for two semesters. The aim of the course was to introduce students to 3D modeling and CAD systems.	October 2014 - April 2015
<b>Site Engineer, Bridge Construction Strabag (internship)</b> My duties included: managing parts of construction projects, undertaking surveys, supervising contracted staff.	January 2013 - July 2013

## REFEREED JOURNAL PAPERS

<b>Kakareko, G., Jung, S., Ozguven, E.E., (under review)</b> Estimation of tree failure consequences due to high winds using convolutional neural networks
<b>Kakareko, G., Jung, S., Mishra, S., Vanli, O.A., (under review)</b> Bayesian capacity model for hurricane vulnerability estimation
<b>Kakareko, G., Jung, S., Vanli, O.A., 2019. (accepted)</b> Hurricane Risk Analysis of the Residential Structures Located in Florida. Sustainable and Resilient Infrastructure

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Kocatepe, A., Ulak, M.B., **Kakareko, G.**, Ozguven, E.E., Jung, S., Arghandeh, R., 2019. Measuring the accessibility of critical facilities in the presence of hurricane-related roadway closures and an approach for predicting future roadway disruptions. *Natural Hazards* 95, 615-635.

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Mishra, S., Vanli, O.A., **Kakareko, G.**, Jung, S., 2019. Preventive maintenance of wood-framed buildings for hurricane preparedness. *Structural Safety* 76, 28-39.

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**Kakareko, G.**, Jung, S., Vanli, O.A., Tecle, A., Khemici, O., Khater, M., 2017. Hurricane loss analysis based on the population-weighted index. *Frontiers in Built Environment* 3, 46.

## CONFERENCE PAPERS AND PRESENTATIONS

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Amirinia, G., Jung, S., **Kakareko, G.**, 2019. Effect of piezoelectric material in mitigation of aerodynamic forces, Sensors and instrumentation, aircraft/aerospace and energy harvesting, volume 8. Springer, pp. 33-40.

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Kocatepe, A., Ulak, M.B., **Kakareko, G.**, Pinzan, D., Cordova, J., Ozguven, E.E., Jung, S., Arghandeh, R., Sobanjo, J.O., 2018. Assessment of emergency facility accessibility in the presence of hurricane-related roadway closures and prediction of future roadway disruptions. *Transportation Research Board 97th Annual Meeting*

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**Kakareko, G.**, Jung, S., Vanli, O.A., Tecle, A., Khemici, O., Khater, M., 2017. Hurricane loss analysis of wood-frame structures in Florida. The 13th Americas Conference on Wind Engineering (13ACWE) Gainesville, Florida USA, May 21-24, 2017.

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**Kakareko, G.**, Jung, S., Ozguven, E.E., Weresa S., 2017. A new approach for road closure probability estimation caused by hurricane winds. 2017, San Diego, California, USA, June 4-7

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**Kakareko, G.**, Jung, S., Vanli, O.A., Mishra, S., Vulnerability estimation of low-rise buildings against wind hazard considering uncertainty in building components, Engineering Mechanics Institute Conference 2016, Nashville, TN, USA, May 22-26

## SKILLS

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Programing	Python, PSQL, SQL, C++, C, Matlab, HTML, CSS, Julia, Wolfram, Mathematica, APDL
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Software	AutoCAD, ANSYS, ABAQUS, LS-DYNA, LabView, ArcGIS
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Office Applications	Latex, Microsoft office
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Operating Systems	Linux, OS, Windows
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## SCHOLARSHIPS

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Federal Alliance for Safe Homes (FLASH) Scholarship	2016
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Dean Scholarship for Sport Achievements	2009-2015
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Special Dean Scholarship for Sport Achievements	2013
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Dean Scholarship for Academic Achievements	2010-2012
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Podlaskie State Marshal Scholarship for Sport Achievements	2012
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President of the Bialystok City Scholarship for Sport Achievements	2012
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Award from President of the Bialystok City (Diligentiae Medal) (Sport & Education)	2009
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## CERTIFICATIONS

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Open Water Advanced Diver L2, Scientific Diving International, SCIDI

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Drysuit Diver, Scientific Diving International, SCIDI

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Lifeguard, International Life Saving Federation

## VOLUNTEER ACTIVITIES

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President of Polish Student Association in Florida State University	2016-2017
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## **SPORT CAREER**

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In my life I took part in many sports disciplines (swimming, boxing, soccer), but as a sportsman I describe myself as a track & field runner. In this discipline, I was a multiple Polish Championship medalist (track & field), a national record holder (400 relay under 20). Moreover, I was a member of Polish national team for many years. I finished my sports career in order to establish my profession career.