**Alexandre Martinez** Email: alex.m@uci.edu
Phone: (512) 419-8363

**EDUCATION**

Ph.D. in Civil Engineering, University of California Irvine, GPA: 3.8/4.0 2016-2021
MSc in Environmental Engineering, University of Texas at Austin, GPA: 3.9/4.0 2011-2013
MSc in Engineering, Ecole Centrale Lille, GPA: 4.0/4.0 2009-2011

**SKILLS**

Data: Time series analysis, Non-stationarity, Joint-probabilities, Extreme events analysis, downscaling, risk assessment, big data, ensemble analysis, climate models.
Coding: Matlab (main), Python (main), JavaScript/C++ (secondary), on Windows, Linux, in the clouds, or on HPC.
Applications: GIS (ESRI), FLUENT, COMSOL, AutoCAD, HEC-RAS, Earth Engine, Google Cloud
Language: French (Native), English (bilingual), Spanish (Fluent), German (Professional).,

**SELECTED EXPERIENCE**

**Center for Hydrometeorology and Remote Sensing** Irvine, CA
*Research Scientist 2016-2021*

* Modeled the impacts of extreme weather on crop’s quality and yield using a combination of ground and remote observations, modeled data, and machine learning techniques (Python, JavaScript, Google Earth Engine).
* Developed an online Google Earth Engine prototype for fast simulation (JavaScript).
* Co-developed toolboxes for non-stationary and bivariate analysis (Matlab).
* Mentored two students to developed web-based simulation tools of some models developed.
* Published two papers, presented to 4 conferences, wrote one funded grant proposal, contributed to the writing of two funded proposal.
* Developed a protocol on using UAVs for data acquisition in geoscience.

**The Climate VR**  Irvine, CA
*Founder and main investigator*  2019-Now

* Founder / CEO of a startup using new technology for improve science-based decision related to hydrologic extremes. Funded by the American Geophysical Union’s grant (2019).
* Recognized by one national award from the American Society of Civil Engineers (2020).
* Consultant for one NOAA’s California Sea Grant (2021-2024).

**Center for Research in Water Resources** Austin, TX
*Research Scientist / Consultant* 2011-2013

* *Investigated* experimentally the behavior of mercury in capped sediment from Lavaca Bay.
* *Trained* a student to perform mercury concentration analysis in sediments.
* Consultant on a flood mapping project using airborne LiDar data for a private project (GIS, HEC-RAS, NetCDF).

**PROJECTS**

**The Climate VR**, Founder / CEO of a startup using new technology for improve science-based decision related to hydrologic extremes (Drones, Virtual and Augmented Reality).
**Climate modeling**, contributed to a research project looking at droughts in the USA under historical, historical natural, and projected climate scenarios.
**Extreme Events,** contributed to the development of several toolbox related to hydrologic extremes and climate change.