Houraa Daher — Curriculum Vitae

Contact Information

University of Miami Rosenstiel School of Marine and Atmospheric Science
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Research Interests

Ocean instrumentation, modeling, and technology, waves and tides, currents and circulation, ocean dynamics, ice, glaciers, and climate change

Education

Ph.D., Ocean Sciences — **2016 - Present**

University of Miami, Coral Gables, FL 33146

- Topic: Quantifying Agulhas Current Leakage
- Advisor: Dr. Lisa Beal

B.S.E., Earth Systems Science and Engineering — **2011 - 2015**

University of Michigan, Ann Arbor, MI USA

- Cum Laude
- Minor in Mathematics

Study Abroad: Physics of the Climate System — **August 2015**

Utrecht University, Utrecht, Netherlands

- Project: Glaciers and Climate Change

Research Experience

Research Scientist — **November 2013 to Present**

Dr. Brian Arbic's Physical Oceanography Modeling Lab, Ann Arbor, MI USA

- Study the effects of the Earths rotation rate and ocean's basin geometry on the tidal energy dissipation over long geological timescales
- Run ocean model MOM6, developed at GFDL, using university supercomputer FLUX

Systems Engineer Intern — **May 2016 to April 2017**

NASA Goddard Space Flight Center, Greenbelt, MD USA

- Use machine learning algorithms to study Mesoscale Convective System (MCS) characteristics and their predictability
- Under the supervision of Dr. Dan Duffy we hope to find characteristics separating MCS that develop into tornadoes vs those that do not

Visiting Research Scientist — **June 2015 to May 2016**

NOAA-GLERL, Ann Arbor, MI USA

- Forecast ice cave season at the Apostle Island National Lakeshore using regression models with Dr. Rebecca Bolinger, Dr. Drew Gronewold, and Dr. Ricky Rood
- Project collaboration between UofM College of Engineering Climate and Space Sciences and Engineering, Great Lakes Integrated Sciences + Assessments, and National Park Service

Publications & Presentations

Houraa Daher, A. Adcroft, J. K. Ansong, B. K. Arbic, J. Austermann, A. C. Maloof, J. X. Mitrovica, M. Müller, *(in prep)* Tidal Dissipation over long Geological Timescales.

Tidal Dissipation over long Geological Timescales* AGU Fall Meeting, San Francisco, CA, USA December 2016

Investigating Mesoscale Convective Systems and their Predictability using Machine Learning Algorithms$^{\diamond}$ AGU Fall Meeting, San Francisco, CA, USA December 2016

Forecasting the Apostle Islands Ice Caves* International Association for Great Lakes Research, Guelph, ON, CA June 2016 *(presentented by Dr. Ricky Rood)*

Tidal Dissipation over long Geological Timescales* AGU Ocean Sciences, New Orleans, LA, USA February 2016

Detecting and Attributing Climate Change in Northern Michigan$^{\diamond}$ UROP Symposium, Ann Arbor, MI, USA April 2012

**oral*, $^{\diamond}$*poster*

Awards and Honors

Stamps Family Charitable Foundation

Stamps Leadership Scholar

- One of 20 students selected from the incoming class of 2015 (6,251 students) at the University of Michigan
- One of 580 scholars nationwide selected from 543,000 applicants
- Chosen on the basis of scholarship, leadership, perseverance, service and innovation

University of Michigan College of Engineering

Vulcan Scholar

- Awarded to outstanding undergraduate in engineering recognized for their leadership activities within the College of Engineering and University of Michigan community, and for their future plans for involvement
- Selection of recipients is based on overall scholarship, character, extra-curricular activities, and financial need

Leaders and Honors: Distinguished Leadership Award

- Awarded to undergraduate and graduate students in College of Engineering who have demonstrated outstanding leadership and service to the College, University, and community

Memberships

- American Physical Society, 2014-Present
- American Geophysical Union, 2015-Present