

## EDUCATION

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**Ph.D.** 2017, Geological Sciences, *The University of Texas at Austin*  
**M.S.** 2010, Mechanical Engineering, *The University of Texas at Austin*  
**B.S.** 2007, Mechanical Engineering with honors, *Virginia Commonwealth University*

## PROFESSIONAL EXPERIENCE

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Dr. Greene is a satellite remote sensing and machine learning specialist in the Sea Level and Ice group under the Earth Science Section at JPL/Caltech, where he is a member of the NASA MEaSUREs ITS\_LIVE Earth data development team. He has conducted multiple seasons of airborne geophysical surveys in Antarctica and has carried out ship-based science in the Arctic, the Gulf of Mexico, and the Baltic Sea. Dr. Greene is a prolific coder with a passion for thorough documentation, creator of many MATLAB toolboxes, and he serves on the Mathworks Community Advisory Board. He has also served as editor of the *Proceedings of the National Academy of Sciences*.

## PEER-REVIEWED PUBLICATIONS

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F. Paolo, A.S. Gardner, **C.A. Greene**, and others. Recent slowdown in rates of West Antarctic ice shelf thinning, *Nature Geoscience* (in review).

**C.A. Greene**, A.S. Gardner, N-J Schlegel, A.D. Fraser. Antarctic calving loss rivals ice shelf thinning, *Nature*, (in press).

Y. Nakayama, **C.A. Greene**, and others. [Antarctic Slope Current modulates ocean heat intrusions towards Totten Glacier](#). *Geophysical Research Letters*, 2021.

**C.A. Greene**, A.S. Gardner, L.C. Andrews. [Detecting seasonal ice dynamics in satellite images](#). *The Cryosphere*, 2020.

W. Wei, D.D. Blankenship, ..., **C.A. Greene**, and others [Getz Ice Shelf melt enhanced by freshwater discharge from beneath the West Antarctic Ice Sheet](#). *The Cryosphere*, 2020.

**C.A. Greene**, K. Thirumalai, K.A. Kearney, and others. [The Climate Data Toolbox for MATLAB](#). *Geochemistry, Geophysics, Geosystems*, 2019.

**C.A. Greene** & K. Thirumalai. It's time to shift emphasis away from code sharing. *Eos*, 2019.

**C.A. Greene** and others. [Seasonal dynamics of Totten Ice Shelf controlled by sea ice buttressing](#). *The Cryosphere*, 2018.

C.F. Dow, W.S. Lee, J.S. Greenbaum, **C.A. Greene**, and others. [Basal channels drive active surface hydrology and transverse ice-shelf fracture](#). *Science Advances*, 2018.

**C.A. Greene** & D.D. Blankenship. [A Method of Repeat Photoclinometry for Detecting Kilometer-Scale Ice Sheet Surface Evolution](#). *IEEE Transactions on Geoscience and Remote Sensing*, 2018.

**C.A. Greene** and others. [Wind causes Totten Ice Shelf melt and acceleration](#). *Science Advances*, 2017.

**C.A. Greene**, D.E. Gwyther, D.D. Blankenship. [Antarctic Mapping Tools for Matlab](#). *Computers & Geosciences*, 2017.

K.M. Thyng, **C.A. Greene**, and others. [True colors of oceanography: Guidelines for effective and accurate colormap selection](#). *Oceanography*, 2016.

C.J. Wilson, P.S. Wilson, **C.A. Greene**, K.H. Dunton. [Seagrass meadows provide an acoustic refuge for estuarine fish](#). *Marine Ecology Progress Series*, 2013.

**C.A. Greene** & P.S. Wilson. [Laboratory investigation of a passive acoustic method for measurement of underwater gas seep ebullition](#). *Journal of the Acoustical Society of America*, 2011.

C.J. Wilson, P.S. Wilson, **C.A. Greene**, K.H. Dunton. [Seagrass leaves in 3-D: Using computed tomography and low-frequency acoustics to investigate the material properties of seagrass tissue](#). *Journal of Experimental Marine Biology and Ecology*, 2010.

## EMPLOYMENT HISTORY

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### **NASA Jet Propulsion Laboratory** Pasadena, CA

Postdoctoral Research Fellow: Feb. 2019 to present

### **Institute for Geophysics** Austin, TX

Research Engineering/Scientist: Sept. 2015 to Feb. 2019

Graduate Research & Teaching Assistant: Aug. 2011 to Sept. 2015

### **Applied Research Laboratories** Austin, TX

Graduate Research Assistant: Jun. 2007 to Aug. 2011

### **Virginia Commonwealth University** Richmond, VA

Teaching Assistant: Jan. 2007 to May 2007

### **Federal Reserve Bank** Richmond, VA

Currency Systems Engineer Intern: May 2006 to Aug. 2006

## FIELD WORK

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### **Casey Station** Wilkes Land, Antarctica

Airborne surveys: Dec. 2017 to Feb 2018

### **Byrd Field Camp** Marie Byrd Land, Antarctica

Airborne surveys: Dec. 2012 to Feb 2013

### **Gulf of Mexico** Port Aransas, TX

Marine acoustic habitat measurements: 2009 to 2011

### **Lake Travis** Austin, TX

Underwater sound abatement tests: 2009 to 2010

### **Eckernförde Bay** Kiel, Germany

Sediment acoustics survey: Jun 2010 to Jul 2020

### **Stennis Space Center** Hancock, MS

Sediment acoustics experiments: Jun 2008 & May 2010

### **Beaufort Sea** Arctic Ocean

USCG Polar Sea expedition Sept 2009 to Oct 2009

## AWARDS, ACCREDITATIONS, & ACCOMPLISHMENTS

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**NASA Postdoctoral Program Fellowship** 2019–present

**National Science Foundation Early Career Scientist Award** June 2018

**NASA Young Investigator Award** July 2016

**Univ. of Texas Institute for Geophysics Outstanding Graduate Student Award** May 2016

**Mathworks (MATLAB) Award for Outstanding Contributions** 2015

**Mathworks File Exchange Pick-of-the-Week** July 2012, July 2013, July 2014

**United States Congressional Antarctic Service Medal** 2013

**Univ. of Texas College of Engineering Fellowship** 2007–2008.

**NCEES Fundamentals of Engineering Exam** passed 2007

**Wright Merit Scholarship** 2002–2007

**Virginia Commonwealth University Dean's List** 2003–2005

**Virginia Commonwealth University Honors Program** 2002–2005

**Bicycled self-supported over 4200 miles from Oregon to North Carolina** 2005

**Eagle Scout** 2002

**Virginia State Certified Emergency Medical Technician** 2002

## IN THE NEWS

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**Scientific American** 2018: [Why Are Glaciers Melting from the Bottom? It's Complicated.](#)

**Scientific American** 2017: [How Wind Might Nudge a Sleeping Giant in Antarctica.](#)

**Wired** 2017: [For Scientists Predicting Sea Level Rise, Wind is the Biggest Unknown.](#)