**Chad A. Greene, Ph.D.**

**NASA / Jet Propulsion Laboratory**

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**Education**

**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**

Dr. Greene is a 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. Chad 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*.

**Employment History**

**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

**Awards, Accreditations, & Accomplishments**

**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**

**Scientific American** 2018: [Why Are Glaciers Melting from the Bottom? It’s Complicated](https://www.scientificamerican.com/article/why-are-glaciers-melting-from-the-bottom-its-complicated/).

**Scientific American** 2017:[How Wind Might Nudge a Sleeping Giant in Antarctica](https://www.scientificamerican.com/article/how-wind-might-nudge-a-sleeping-giant-in-antarctica/).

**Wired** 2017: [For Scientists Predicting Sea Level Rise, Wind is the Biggest Unknown](https://www.wired.com/story/wind-is-driving-rapid-melt-in-antarcticas-biggest-glacier/).

**Peer-Reviewed Publications**

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

F. Paolo, A.S. Gardner, **C.A. Greene**, J.N. Nilsson, M.P. Schodlok, N. Schlegel. Recent slowdown in rates of West Antarctic ice shelf thinning, *in review*.

Y. Nakayama, **C.A. Greene,** F.S. Paolo, V. Mensah, H. Zhang, H. Kashiwase, D. Simizu, J.S. Greenbaum, D.D. Blankenship, A. Abe-Ouchi, S Aoki. [Antarctic Slope Current modulates ocean heat intrusions towards Totten Glacier](https://doi.org/10.1029/2021GL094149). *Geophysical Research Letters*, 2021.

**C.A. Greene**, A.S. Gardner, L.C. Andrews. [Detecting seasonal ice dynamics in satellite images](https://doi.org/10.5194/tc-14-4365-2020). *The Cryosphere*, 2020.

W. Wei, D.D. Blankenship, J.S. Greenbaum, N. Gourmelen, C.F. Dow, T.G. Richter, **C.A. Greene**, D.A. Young, S.-H. Lee, T.-W. Kim, W.S. Lee, K.M. Assmann. [Getz Ice Shelf melt enhanced by freshwater discharge from beneath the West Antarctic Ice Sheet](https://www.doi.org/10.5194/tc-14-1399-2020). *The Cryosphere*, 2020.

**C.A. Greene**, K. Thirumalai, K.A. Kearney, J.M. Delgado, W. Schwanghart, N.S. Wolfenbarger, K.M. Thyng, D.E. Gwyther, A.S. Gardner, D.D. Blankenship. [The Climate Data Toolbox for MATLAB](https://www.doi.org/10.1029/2019GC008392). *Geochemistry, Geophysics, Geosystems*, 2019.

**C.A. Greene** & K. Thirumalai. [It’s time to shift emphasis away from code sharing](https://www.doi.org/10.1029/2019EO116357). *Eos*, 2019.

**C.A. Greene**, D.A. Young, D.E. Gwyther, B.K. Galton-Fenzi, and D.D. Blankenship. [Seasonal dynamics of Totten Ice Shelf controlled by sea ice buttressing](https://doi.org/10.5194/tc-12-2869-2018). *The Cryosphere*, 2018.

C.F. Dow, W.S. Lee, J.S. Greenbaum, **C.A. Greene**, D.D. Blankenship, K. Poinar, A.L. Forrest, D.A. Young, and C.J. Zappa. [Basal channels drive active surface hydrology and transverse ice-shelf fracture](https://doi.org/10.1126/sciadv.aao7212). *Science Advances*, 2018.

**C.A. Greene** & D.D. Blankenship. [A Method of Repeat Photoclinometry for Detecting Kilometer-Scale Ice Sheet Surface Evolution](https://doi.org/10.1109/TGRS.2017.2773364). *IEEE Transactions on Geoscience and Remote Sensing*, 2018.

**C.A. Greene**, D.D. Blankenship, D.E. Gwyther, A. Silvano, E. van Wijk. [Wind causes Totten Ice Shelf melt and acceleration](https://doi.org/10.1126/sciadv.1701681). *Science Advances*, 2017.

**C.A. Greene**, D.E. Gwyther, D.D. Blankenship. [Antarctic Mapping Tools for Matlab](https://doi.org/10.1016/j.cageo.2016.08.003). *Computers & Geosciences*, 2017.

K.M. Thyng, **C.A. Greene**, R.D. Hetland, H.M. Zimmerle, S.F. DiMarco. [True colors of oceanography: Guidelines for effective and accurate colormap selection](https://www.jstor.org/stable/24862699). *Oceanography*, 2016.

C.J. Wilson, P.S. Wilson, **C.A. Greene**, K.H. Dunton. [Seagrass meadows provide an acoustic refuge for estuarine fish](https://doi.org/10.3354/meps10045). *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](https://doi.org/10.1121/1.3670590). *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](http://dx.doi.org/10.1016/j.jembe.2010.08.025). *Journal of Experimental Marine Biology and Ecology*, 2010.

**Field Work**

**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