

Julie M. Sanchez

JPL Postdoctoral Fellow

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Education

- 2017-08 - 2022-08** **Doctorate of Philosophy: Geography**
The Pennsylvania State University - State College, PA
- 2015-08 - 2017-08** **Master of Science: Geography**
The Pennsylvania State University - State College, PA
- 2010-09 - 2014-06** **Bachelor of Science: Geography**
California State Polytechnic University, Pomona - Pomona, CA

Research Interests

Surface melt of the Greenland Ice Sheet; Arctic amplification and the effect on atmospheric circulations; climate change; synoptic climatology; climate dynamics; teleconnections and Arctic processes; general circulation of the atmosphere and climate

Professional Experience

- 2022-06 - Current** **Postdoctoral Fellow**
NASA, Jet Propulsion Laboratory, La Cañada Flintridge, CA
- 2015-08 - 2022-05** **Graduate Assistant**
The Pennsylvania State University, State College, PA
- 2019-10 - 2019-11** **Visiting Scholar**
Lamont-Doherty Earth Observatory, Palisades, NY
Hosted by Dr. Marco Tedesco
- 2016-07 - 2016-07** **Visiting Research Scholar**
National Center For Atmospheric Research And NSIDC, Boulder, CO
Hosted by Dr. Scott Landolt and Dr. Mark Serreze
- 2015-05 - 2015-08** **Internship Student**
NASA, Jet Propulsion Laboratory, La Cañada Flintridge, CA
Mentored by Stephanie Granger

2014-06 - 2014-12

Consultant

NASA, Jet Propulsion Laboratory, La Cañada Flintridge, CA

2013-12 - 2014-06

GIS Intern

Air Quality Management District GIS Intern, Diamond Bar, CA

Presentations

- 2020** Sanchez JM. Downward Infrared Radiation Dominates Arctic Warming and Greenland Ice Sheet Surface Melt. Earth and Mineral Sciences Graduate Research Showcase, Talk.
- 2020** Sanchez JM. Downward Infrared Radiation Dominates Arctic Warming and Greenland Ice Sheet Surface Melt. Graduate Climate Conference associated with the University of Washington's Program on Climate Change and the MIT Department of Earth, Atmospheric and Planetary Sciences, Poster.
- 2019** Sanchez JM. Regional and Remote Forcing of Melt on the Greenland Ice Sheet: Interactions with Sea Ice and Atmospheric Circulation. American Geophysical Union. San Francisco, CA. Poster.
- 2018** Sanchez JM and Carleton AM. Changes in autumn circulation due to summer sea ice loss in the Arctic. American Association of Geographers Annual Meeting. New Orleans, LA. Talk.
- 2017** Sanchez JM and Carleton AM. The impacts of Arctic Amplification on the jet stream, atmospheric blocking, and teleconnections. American Association of Geographers Annual Meeting. Boston, MA. Talk.
- 2017** Sanchez JM and Carleton AM. Mid-Latitude Climate Change: The impacts of Arctic Amplification on the jet stream, atmospheric blocking, and teleconnections. US CLIVAR Arctic Change and Its Influence on Mid-Latitude Climate and Weather. Washington, D.C. Poster.
- 2017** Sanchez JM and Carleton AM. Mid-Latitude Climate Change: Arctic Amplification in the summer and fall seasons. Geography Recognition Reception. University Park, PA. Poster.
- 2016** Sanchez JM and Carleton AM. The changing climate: Arctic amplification and its impact on the jet stream and middle latitude climates. American Association of Geographers Annual Meeting. San Francisco, CA. Poster.
- 2015** Sanchez JM. Dissecting Drought. NASA Jet Propulsion Laboratory. Pasadena, CA. Talk.

- 2015** Barker M, **Sanchez JM**, Wrigley R. Novel Methods for Detecting and Monitoring Drought Conditions in the Southwestern United States from Atmospheric Conditions Detected with NASA's Atmospheric Infrared Sounder (AIRS). NASA DEVELOP Closeout, NASA Jet Propulsion Laboratory. Pasadena, CA. Talk.
- 2014** Barker M, **Sanchez JM**, and Schochet A. Utilizing Remotely Sensed Atmospheric Infrared Sounding Data for Near-Real-Time Air Quality Applications in Health Assessments and Pollutant Regulation. NASA DEVELOP Closeout, NASA Jet Propulsion Laboratory. Pasadena, CA. Talk.
- 2013** Sanchez JM. Tornadoes in California. Student Research Conference, Cal Poly. Pomona, CA. Talk.

Grants and Fellowships

External

- 2020-2016** NASA Pennsylvania Space Grant Consortium Graduate Research Fellowship (\$20,000)

Internal

- 2019** Miller Graduate Student Fellowship (\$14,000)
- 2018** C. Gregory Knight Academic Enrichment, Penn State University (\$1,200)
- 2015-2016-2020** Bunton Waller Fellowship
- 2015** Fund for Excellence in Graduate Recruitment, Penn State University (\$1,000)

Awards and Honors

External

- 2018** Best Student Paper, Polar Geography Specialty Group (\$300)

Internal

- 2020** Nancy Brown Geography Community Service Award (\$100)
- 2015** Environmental Scholar, Earth and Environmental Systems Institute, Penn State University (\$2,000)
- 2012** Wayne Abbott Swenson Scholarship Recipient, Department of Geography, Cal Poly

Teaching

2017-2019

Course Instructor

Department of Geography, The Pennsylvania State University, State College, PA

Courses: Global Parks and Sustainability (GEOG 001 Web)

2013- 2020

Teaching Assistant

Department of Geography, The Pennsylvania State University, State College, PA

Courses: Advanced Spatial Analysis (GEOG 464), Geographic Information Systems (GEOG 362), Mapping our Changing World (GEOG 160 Web), Physical Geography (GEOG 210), Geographic Perspectives on Sustainability and Human-Environment Systems (GEOG 30), Global Parks and Sustainability (GEOG 1)

Department of Geography, California State Polytechnic University, Pomona, CA

Course: Digital Image Processing (GEOG 420)

2016-2018

Guest Lecturer

Department of Geography, The Pennsylvania State University, State College, PA

Courses: Physical Geography (GEOG 210), Geographic Perspectives on Sustainability and Human-Environment Systems (GEOG 30)

Department of Geography, California State Polytechnic University, Pomona, CA

Courses: Climatology (GEOG 310)

Service

Department Service

2020

Panelist, Geography Roundtable held by Supporting Women in Geography, Penn State University

2019

Mentor, Undergraduate Research Opportunities Connection, Penn State University

2018

Co-organizer, Climate Workshop, Geography, Penn State University

2017-2018

Student assistant, Course proposal/curriculum development and assessments, Geography, Penn State University

2016-2017

President, Supporting Women in Geography, Penn State University

2012-2013

Secretary, Geography Club, Cal Poly

Community Service

2019

Speaker, Montebello Intermediate School

2017-2019	Volunteer, ENVISION: STEM Career Day for Girls
2017	Speaker, Montebello High School
2016-2018	Co-organizer and volunteer, Supporting Young Women in Geography Day
2016-2018	Volunteer, Exploration-U: Community Science Night
2016	Speaker, Montebello Intermediate School
2015	Speaker, Montebello Intermediate School

Membership in Professional Associations

Penn State's Ice and Climate Exploration
 American Association of Geographers
 American Geophysical Union
 Pi Gamma Mu Honor Society

Certificates

2019-05	Graduate Student Online Teaching Certificate
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Software

NCEP/NCAR Reanalysis interface	● ● ● ● ●
ArcGIS	● ● ● ● ●
Microsoft Office	● ● ● ● ●
QGIS	● ● ● ● ●
NASA'S Atmospheric Infrared Sounder	● ● ● ● ●
ERDAS Imagine	● ● ● ● ●
Python	● ● ● ● ●
MATLAB	● ● ● ● ●
NCAR Command Language	● ● ● ● ●
R	● ● ● ● ●
STATA	● ● ● ● ●