Lucas Sterzinger, PhD

EXPERIENCE

NASA - GES DISC (ADNET SYSTEMS, INC) | Mission Support Scientist + Software Developer
January 2023 – Present
NASA Goddard Space Flight Center - Greenbelt, MD (Fully Remote)

- Goddard Earth Science Data and Information Services Center
- I am responsible for NASA satellite mission data processing, archive, and distribution at GES DISC. Total archive size: 7.1 PB (https://disc.gsfc.nasa.gov)
- I support development of cloud-native data tools and application for the NASA EarthData ecosystem (https://earthdata.nasa.gov)
- Support science data processing, local + cloud software engineering, data curation, and archive operations throughout the entire GES DISC archive center

UNIVERSITY OF CALIFORNIA, DAVIS | Graduate Research Assistant
August 2017 – March 2023 | Davis, CA

- Worked with **Adele Igel** on reserch related to cloud and precipitation physics. Projects included "real" and idealized simulations of mixed phase clouds - see Google Scholar or ORCiD links for more details

UNIVERSITY OF NORTH DAKOTA | Dept of Atmospheric Sciences
Research Assistant 2015 - 2017
Teaching Assistant 2016 - 2017

UNIVERSITY OF NORTH DAKOTA | School of Medicine and Health Sciences
2012 - 2017
Technical Support Specialist

SELECTED PUBLICATIONS

[1] L. J. Sterzinger and A. L. Igel. The effects of ice habit on simulated orographic snowfall. *Journal of Hydrometeorology*, 22(6):1649 – 1661, 2021.

[2] L. J. Sterzinger and A. L. Igel. Above-cloud concentrations of cloud condensation nuclei help to sustain some arctic low-level clouds. *Atmospheric Chemistry and Physics*, 24(6):3529–3540, 2024.

[3] L. J. Sterzinger, J. Sedlar, H. Guy, R. R. Neely III, and A. L. Igel. Do arctic mixed-phase clouds sometimes dissipate due to insufficient aerosol? evidence from comparisons between observations and idealized simulations. *Atmospheric Chemistry and Physics*, 22(13):8973–8988, 2022.

CODING PROJECTS

KERCHUNK | Contributor
https://github.com/fsspec/kerchunk

- Kerchunk provides performant access to cloud-hosted NetCDF4/HDF5 data
- Core contributor starting in June 2021, though currently less active

PYRAMS | Creator
https://github.com/lsterzinger/pyrams

- Package originally created for my work with RAMS model output
- Open-sourced and packaged in PyPi/Conda-Forge for use by the broader RAMS community

EDUCATION

UNIV. OF CALIFORNIA, DAVIS
PhD in Atmospheric Science
February 2023 | Davis, CA

- Dissertation: *Ice, Liquid, and Aerosol: Mixed-Phase Cloud Properties and Processes in Regional and Large Eddy Simulations*

Cum. GPA: 3.74 / 4.0

UNIV. OF NORTH DAKOTA
B.S. Atmospheric Science
B.S. Aeronautics
May 2017 | Grand Forks, ND

- Minor in Mathematics

SOCIETIES

American Meteorlogical Society (AMS)
American Geophysical Union (AGU)

LINKS

Github: **lsterzinger**
Google Scholar: **Lucas Sterzinger**
ORCiD: **0000-0003-3321-4534**