

DANIEL W. ZIETLOW, PH.D. - *Curriculum Vitae* 2024

zietlow@ucar.edu

EDUCATION

Ph.D., Geophysics, University of Colorado, Boulder May 2016

Dissertation: *Four Brothers and a Waka: Investigating Accommodation of Shear and Convergence Underlying the South Island of New Zealand*

A.B.H., Physics and Art History, Rollins College May 2010

Honors Thesis: *The Dynamic Response of Circular Flat Plates*

PROFESSIONAL EXPERIENCE

Educational Designer II 2018 - present

NSF National Center for Atmospheric Research (NSF NCAR)

- Co-leads the Engagement Section in the Education, Engagement & Early-Career Development Center of Excellence
- Directs and manages full-service video production efforts
- Develops and co-leads community engagement projects (e.g., lectures, exhibits)
- Designs and facilitates workshops on science communication and filmmaking

Producer, Executive Director, Editor 2014 - present

Provare Media (<http://www.provaremedia.com>)

- Co-leads development, filming, and editing of original science-focused media
- Production designer and editor on full-length documentary *Tomorrow*
- Co-produced *Breaking Science*, a YouTube-based science show
- Member of Truce Studios since 2024: <https://www.trucestudios.com>

Videographer, Editor, and Education Generalist 2016 - 2018

UNAVCO, Inc. (now EarthScope Consortium)

- Produced video content and educational materials (e.g., posters, hands-on demos)

Graduate Research Assistant 2010 - 2016

University of Colorado, Boulder

- Undertook independent geophysical research incorporating ocean bottom seismometers into seismic anisotropy and body wave tomography studies

Undergraduate Research Assistant 2006 - 2010

Rollins College

- Physics research focused on the musical acoustics of trumpets and flat plates

SCIENTIFIC AND VIDEOGRAPHY FIELDWORK EXPERIENCE

CAESAR, Kiruna, Sweden (videography) 2024

- Coordinated with science team to write, direct, produce, and edit mini-documentaries about the science and team of CAESAR

- Mini-documentaries: <https://edec.ucar.edu/public/ncar-explorer-series-field-campaigns/caesar>

CATE 2024, Exmouth, Australia; Eastern USA (videography) 2023 - 2024

- Developed and directed filming efforts, including production of a PBS documentary

OTREC, Liberia, Costa Rica (videography) 2019

- Interviewed the Organization of Tropical East Pacific Convection project team
- Documented science and education activities

RELÁMPAGO, Córdoba, Argentina (videography) 2018

- Documented the Remote Sensing of Electrification, Lightning, and Mesoscale/Microscale Processes with Adaptive Ground Observations field campaign

WE-CAN, Boise, Idaho (videography) 2018

- Documented scientists and students during Western wildfire Experiment for Cloud chemistry, Aerosol absorption and Nitrogen

Arctic Caribou, Toolik Lake Field Station, Alaska (videography) 2017

- Filmed the story of how arctic caribou are impacted by climate change
- *Adventures in Science* pilot: <https://vimeo.com/269211129>

Kaapvaal Craton, Johannesburg, South Africa (scientific) 2016

- Collected syenite samples across southern Africa for thermochronology work

Black Ice Himalaya, Ngozumpa Glacier, Nepal (scientific & videography) 2013

- Installed/dismantled time-lapse cameras and ran sonar for glacial studies

DRIFTER, Colorado and New Mexico (scientific) 2012 - 2013

- Installed/removed long-period and broadband magnetotelluric equipment for the Deep RIFT Electrical Resistivity Experiment in the Rio Grande Rift

Cascadia Initiative, Offshore Oregon and Washington (scientific) 2012

- Recovered ocean bottom seismometers associated with the Cascadia Initiative Experiment from abroad R/V Oceanus
- Expedition blog: <http://cascadia.uoregon.edu/CIET/leg-1-may-12-may-26-2012-rv-oceanus-oc-1205a - Out at Sea: A Graduate Student39s Perspective of the CIET>

Bighorn Arch Seismic Experiment, Wyoming (scientific) 2010

- Installed/removed "Texan" seismometers in an active source experiment

TEACHING EXPERIENCE

Film and Storytelling Workshops 2018 - present

- Develops and facilitates workshops on the fundamentals of filmmaking and science storytelling for university and scientific organization audiences

- Earth Explorers** 2018 - present
- Co-teaches a middle school STEM class designed for underrepresented youth that combines the exploration of science with videography skills
- Putney Student Travel** 2017 - 2022
- National Geographic Student Expeditions & New York Times Student Journeys*
- Expedition leader on trips to Cambridge, MA; Berkeley, CA; and Switzerland teaching high school students about science, innovation, and travel
- Graduate Teaching Assistant**, University of Colorado, Boulder 2012, 2015
- GEOL 4130: Principles of Geophysics - taught weekly recitations and in-class demonstrations, and created weekly reading quizzes
 - GEOL 4714/5714: Field Geophysics - developed weekly quizzes, taught students to deploy geophysical instrumentation, and maintained field equipment

SELECTED PUBLICATIONS

1. A. Morales, L. Medina Luna, **D.W. Zietlow**, J.E. LeBeau, and M.J. Molina, "Testing the impact of culturally-relevant communication style on engagement with Hispanic and Latinx adults," *Journal of Geoscience Education*, <https://doi.org/10.1080/10899995.2022.2120701> (2022).
2. R.W. Vachon, **D.W. Zietlow**, A. Gold, and E. Leckey, *Sharing Science With Film: A Guide to Student Productions*, available from: <https://ceee.colorado.edu/resources/sharing-science-film-guide-student-productions> (2019).
3. **D.W. Zietlow**, A.F. Sheehan, and M.V. Bernardino, "Teleseismic S-wave tomography of South Island, New Zealand upper mantle," *Geosphere*, doi: 10.1130/GES01591.1 (2018).
4. **D.W. Zietlow**, P.H. Molnar, and A.F. Sheehan, "Teleseismic P-wave tomography of South Island, New Zealand upper mantle: Evidence of subduction of Pacific lithosphere since 45 Ma," *J. Geophys. Res. Solid Earth*, doi: 10.1002/2015JB012624 (2016).
5. **D.W. Zietlow**, A.F. Sheehan, P.H. Molnar, M.K. Savage, G. Hirth, J.A. Collins, and B.H. Hager, "Mantle seismic anisotropy at a strike-slip fault: South Island, New Zealand," *J. Geophys. Res. Solid Earth*, 119, doi: 10.1002/2013JB010676 (2014).
6. **D.W. Zietlow**, D.C. Griffin, and T.R. Moore, "The limitations on applying classical thin plate theory to thin annular plates clamped on the inner boundary," *AIP Advances*, 2, 042103, doi: 10.1063/1.4757928 (2012).
7. W. Kausel, **D.W. Zietlow**, and T.R. Moore, "Influence of wall vibrations on the sound of brass wind instruments," *Journal of the Acoustical Society of America*, 128, 3161-3175, doi: 10.1121/1.3493457 (2010).

8. T.R. Moore, **D.W. Zietlow**, C.W. Gorman, D.C. Griffin, C.P. Ballance, and D.J. Parker, "Transient motion of a circular plate after an impact," *Journal of the Acoustical Society of America*, 125, EL63-EL69, doi: 10.1121/1.3049584 (2009).

SELECTED PRESENTATIONS

1. **D.W. Zietlow**, A. Caspi, S. Kovac, E. McUmbler, R. Haacker, and C. Kessler, "Citizen CATE 2024: Leadership lessons learned running a large-scale community science project for the 2024 total solar eclipse," 2024 Meeting of the American Geophysical Union, Washington, D.C., December 9-13, 2024.
2. **D.W. Zietlow**, E. Snode-Brenneman, J. Aquino, B. Hatheway, I. Vu, and T.L. Campos, "Bringing the public to the NCAR Research Aviation Facility using virtual tour technology," 2023 Meeting of the American Geophysical Union, San Francisco, CA, December 11-15, 2023.
3. J.D. Ristvey, M. Rummel, J. Heiderer, B. Hatheway, **D.W. Zietlow**, and M. Lane, "Engaging Diverse Communities to Encourage Youth Participation in STEM: Examples through Video," 2023 Meeting of the American Geophysical Union, San Francisco, CA, December 11-15, 2023.
4. **D.W. Zietlow**, L. Medina Luna, R. Haacker, and Z. Fuchs-Stone, "Involving Undergraduate Students in the OTREC Field Campaign," 2023 Meeting of the American Meteorological Society, Denver, CO, January 9-12, 2023.
5. **D.W. Zietlow**, L. Medina Luna, L. Human, J.D. Ristvey, Z. Fuchs-Stone, and R. Haacker, "Bringing Scientific Field Campaigns Into The Classroom Through Teacher Guides," 2022 Meeting of the American Geophysical Union, Chicago, IL, December 12-16, 2022.
6. **D.W. Zietlow**, L. Medina Luna, and C.A. Davis, "Thinking of new ways to engage through the NCAR Explorer Series," 2021 Meeting of the American Geophysical Union, New Orleans, LA, December 13-17, 2021.
7. **D.W. Zietlow**, L. Medina Luna, R.W. Vachon, and R. Haacker, "Bringing Your Film Idea to Life: Crafting Outreach Videos for Diverse Audiences," Workshop at the 2020 Meeting of the American Geophysical Union, virtual.
8. **D.W. Zietlow** and R.W. Vachon, "Developing a Youth Science Education TV Series from the Ground Up," 2019 Meeting of the American Geophysical Union, San Francisco, CA, December 9-13, 2019.
9. L. Medina Luna and **D.W. Zietlow**, "NCAR Explorer Series: Videos of Real People, Doing Real Science," 2019 Meeting of the American Geophysical Union, San Francisco, CA, December 9-13, 2019.

10. **D.W. Zietlow**, B. Bartel, and S.E. Olds, "Hands-On Geodesy: Engaging the Public and Fostering Intern Professional Development," 2017 Annual Meeting of the Geological Society of America, Seattle, WA, October 22-25, 2017.
11. **D.W. Zietlow**, C. Molnar, C.M. Meertens, D.A. Phillips, B.A. Bartel, and D.J. Ertz, "Geodetic Data Via Web Services: Standardizing Access, Expanding Accessibility, and Promoting Discovery," 2016 Meeting of the American Geophysical Union, San Francisco, CA, December 12-16, 2016.
12. **D.W. Zietlow** and A.F. Sheehan, "Investigating Lithospheric Structure via Ocean Bottom Seismometers: South Island, New Zealand," 2013 Ocean Bottom Seismometer Workshop, Redondo Beach, CA, October 21-22, 2013.
13. **D.W. Zietlow**, A.F. Sheehan, Z. Yang, J.C. Stachnik, J. Collins, and M.K. Savage, "Determining Mantle Anisotropy at a Transform Plate Boundary via Ocean Bottom Seismometers: South Island, New Zealand," IUGG Mathematical Geophysics Conference, Edinburgh, UK, June 18-22, 2012.
14. **D.W. Zietlow** and T.R. Moore, "The auger shell whistle," 158th Meeting of the Acoustical Society of America, San Antonio, TX, October 19-23, 2009.
15. T.R. Moore, **D.W. Zietlow**, and C. Gorman, "High-speed electronic speckle pattern interferometry of a struck flat plate," 155th Meeting of the Acoustical Society of America, Paris, France, June 30-July 4, 2008.

EXTERNAL GRANTS AND FELLOWSHIPS

1. National Science Foundation, Division of Astronomical Sciences, *Citizen CATE at the 2024 Total Solar Eclipse*, \$299,407, 2022-2024
2. National Science Foundation, Geosciences Directorate, *EAGER: Elevating and empowering Hispanic/Latinx voices through video: Reducing barriers in academia and building an ecosystem for success in the Earth system sciences*, \$256,312, 2021-2023
3. National Science Foundation, Office of International Science & Engineering, East Asia and Pacific Summer Institutes (EAPSI), *Constraining Anisotropy Under the South Island of New Zealand*, \$5700, 2011

HONORS AND AWARDS

Official Selection: Polar Film Fest	2024
University Corporation for Atmospheric Research Education & Outreach Award	2021
Best Documentary: Western Canadian International Film Festival	2021
Semi-Finalist: New York City Film & Television Festival	2021
Official Selection: Markham (Canada) International Film Festival	2021
Northwest Regional Emmy Nomination	2019

CIRES Graduate Student Research Award	2014
Bruce Curtis Graduate Fellowship	2011
Senior Scholar in Science and Mathematics Division, Rollins College	2010
Senior Scholar in Physics, Rollins College	2010
Best Student Paper Award in Musical Acoustics, Acoustical Society of America	2009

PROFESSIONAL ORGANIZATIONS

American Geophysical Union
American Meteorological Society
Geological Society of America
National Academy of Television Arts & Sciences Heartland Chapter

SUMMARY OF OTHER QUALIFICATIONS

Proficient with Adobe Premiere Pro, Photoshop, Audition, After Effects, Illustrator, InDesign, DSLR and mirrorless cameras, sound/lightning design, NSF grant writing and project management, MatLab and Bash scripting, HTML coding, website management, and Microsoft Office products.