

Biographical Sketch
CHARLES S. (CHARLIE) ZENDER

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a. PROFESSIONAL PREPARATION

Harvard University, Cambridge MA	Physics	B.A.	1990
University of Colorado at Boulder	Atmospheric Science	Ph.D.	1996
NCAR Advance Studies Program, Boulder CO	Clouds & Aerosols	Postdoc	1996–1998

b. APPOINTMENTS

7/12– Professor of Computer Science, University of California, Irvine (UCI)
7/10– Professor of Earth System Science, UCI
9/10–8/13 Vice Chair of Graduate Studies, Department of Earth System Science, UCI
7/05–6/10 Associate Professor of Earth System Science, UCI
8/07–8/08 Visiting Researcher, Laboratoire de Glaciologie et Géophysique de l'Environnement (CNRS/LGGE), Grenoble, France
3/00–2/06 Affiliate Scientist of the Climate and Global Dynamics (CGD) Division, National Center for Atmospheric Research (NCAR), Boulder, CO
7/99–6/05 Assistant Professor of Earth System Science, UCI
7/98–9/99 Visiting Scientist in Atmospheric Chemistry and CGD Divisions, NCAR
7/96–6/98 Postdoctoral Fellow, Advanced Studies Program, NCAR
8/91–6/96 Graduate Research Assistant, University of Colorado at Boulder and NCAR

c. (i). FIVE PUBLICATIONS RELATED TO PROPOSED TOPIC (author is/was in our group: *high school, **undergraduate, *graduate student, †post-doc, ‡researcher)**

Zender, C. S., P. J. T. Leonard (2016), and the NASA Dataset Interoperability Working Group (DIWG), ES/DS-RFC-028: Dataset Interoperability Recommendations for Earth Science, National Aeronautics and Space Administration (NASA) Earth Science Data Systems (ES/DS) Standards Office (ESO), Washington, DC. ([PDF](#))

***Wang, W.**, **C. S. Zender**, D. van As, P. C. J. P. Smeets, and M. R. van den Broeke (2016), A Retrospective, Iterative, Geometry-Based (RIGB) tilt correction method for radiation observed by automatic weather stations on snow-covered surfaces: application to Greenland, *The Cryosphere*, **10**, 727–741, doi:10.5194/tc-10-727-2016. ([PDF](#))

Zender, C. S. (2012), Snowfall brightens Antarctic future, *Nature Clim. Change*, **2**(11), 770–771, doi:10.1038/nclimate1730. ([PDF](#))

†**Wang, X.**, and **C. S. Zender** (2011), Arctic and Antarctic diurnal and seasonal variations of snow albedo from multiyear Baseline Surface Radiation Network measurements, *J. Geophys. Res. Earth Surf.*, **116**, F03008, doi:10.1029/2010JF001864. ([PDF](#))

†**Wang, X.**, and **C. S. Zender** (2010), Constraining MODIS snow albedo at large solar zenith angles: Implications for the surface energy budget in Greenland, **115**, F04015, *J. Geophys. Res. Earth Surf.*, doi:10.1029/2009JF001436. ([PDF](#))

c. (ii). FIVE ADDITIONAL PUBLICATIONS

Zender, C. S. (2016), Bit Grooming: Statistically accurate precision-preserving quantization with compression, evaluated in the netCDF Operators (NCO, v4.4.8+), *Geosci. Model Dev.*, **9**, 3199–3211, doi:10.5194/gmd-9-3199-2016. ([PDF](#))

†**Allen, R. J.**, S. C. Sherwood, J. R. Norris, and **C. S. Zender** (2012), Recent Northern Hemisphere tropical expansion primarily driven by black carbon and tropospheric ozone, *Nature*, **485**(7398), 350–354, doi:10.1038/nature11097. ([PDF](#))

Zender, C. S., *****A. G. Krolewski**, ***M. G. Tosca**, and J. T. Randerson (2012), Tropical biomass burning smoke plume size, shape, reflectance, and age based on 2001–2009 MISR imagery of Borneo, *Atmos. Chem. Phys.*, **12**, 3437–3454, doi:10.5194/acp-12-3437-2012. ([HTML](#), [PDF](#))

Flanner, M. G., **C. S. Zender**, P. G. Hess, N. M. Mahowald, T. H. Painter, V. Ramanathan, and P. J. Rasch (2009), Springtime Warming and Reduced Snow Cover from Carbonaceous Particles, *Atmos. Chem. Phys.*, **9**(7), 2481–2497, <http://www.atmos-chem-phys.net/9/2481/2009>. ([PDF](#))

Zender, C. S. (2008), Analysis of Self-describing Gridded Geoscience Data with netCDF Operators (NCO), *Environ. Modell. Softw.*, **23**(10), 1338–1342, doi:10.1016/j.envsoft.2008.03.004. ([PDF](#))

d. SYNERGISTIC ACTIVITIES

1. Co-Chair, NASA Dataset Interoperability Working Group ([DIWG](#)), 2013–2016.
2. Author and maintainer, netCDF Operators ([NCO](#)), 1995–present.
3. Expert Reviewer, IPCC WG1 TAR and AR4 Reports, 2000 and 2006.
4. Regular [speaker](#), Osher Lifelong Learning Institute ([OLLI](#)), 2003–present.
5. Author/maintainer: Freely Available Community Texts ([FACTs](#)) on [Radiative Transfer](#), and [Natural Aerosols](#), and [Particle Size Distributions](#). 1999–present.

Table 1: Associates Of C. Zender

Person	Affiliation	Academic Relation
Albani, S.	Cornell	Co-author
Allen, R. J.	UCR	Postdoc advisee
Bader, D. C.	LLNL	Collaborator
Bian, H.	NASA/UMBC	PhD and postdoc advisee
Bond, T. C.	UIUC	Co-author
Burrows, S. M.	PNNL	Collaborator
Caldwell, P. M.	LLNL	Collaborator
Capps, S. B.	UCLA	PhD advisee
Cooper, W. A.	NCAR	Postdoc advisor
Davis, E.	Unidata	Collaborator
Delman, E.	UCI	PhD advisee
Dominé, F.	LGGE	Co-author
Famiglietti, J.	UCI	Co-PI
Flanner, M. G.	UM	PhD advisee
Gorris, M.	UCI	PhD advisee
Grini, A.	U. Oslo	PhD advisee
Han, Q.	UCI	PhD advisee
Hunke, E. C.	LANL	Collaborator
Jelenak, A.	HDF Group	Collaborator
Kiehl, J. T.	NCAR	PhD advisor
LeBauer, D. L.	UIUC	Collaborator
Leonard, P. J. T.	GSFC	Co-author
Lynnes, C. S.	GSFC	Co-author
Mahowald, N. M.	Cornell	Co-author
Miller, R.	NASA GISS	Co-author
Moore, J. K.	UCI	Co-author
Parajuli, S.	UCI	Postdoc advisee
Randerson, J. T.	UCI	Co-author
Rasch, P. J.	PNNL	Collaborator
Rew, R.	Unidata	Collaborator
Scanza, R. A.	Cornell	Co-author
Silver, J. D.	U. Melbourne	Co-author
Taylor, M. A.	SNL	Collaborator
Thomas, G. T.	CU	PhD advisor
Tosca, M. G.	JPL	PhD advisee
Wang, D. L.	SLAC	PhD advisee
Wang, X.	SYSU	Postdoc advisee
Williams, D.	LLNL	Collaborator
Wolff, Z.	UCI	PhD advisee
van As, D.	GEUS	Co-author

Table 1: **Associates Of C. Zender** (continued)

Person	Affiliation	Academic Relation
van den Broeke, M. R.	IMAU	Co-author