

David Ian Duncan

Curriculum Vitae

David.duncan@chalmers.se
Phone: +46 703 40 8015
Office: Hörsalsvägen 11, 4339

Department of Space, Earth, and Environment
Chalmers University of Technology
SE-412 96, Gothenburg
Sweden

Education

University of Illinois Urbana-Champaign, 2006 - 2010

B.S. in Specialized Physics (2010)

B.A. in English Literature (2010)

Colorado State University, 2010 - 2017

Advised by Professor Christian Kummerow

M.S. in Atmospheric Science (2013)

PhD in Atmospheric Science (2017)

Research Interests

- Satellite retrieval theory and variational techniques
- Radiative transfer and satellite data assimilation
- Cloud and precipitation interactions and feedbacks
- Climate change signals in satellite data products

Selected Presentations

- Oral presentation at GEWEX GDAP annual meeting, Tokyo, August 2011
- Posters at AGU annual meeting, 2012 and 2016; oral presentation, 2015
- Oral presentation at *ISCCP at 30* meeting, New York City, April 2013
- Oral presentation at AGU annual meeting, December 2015
- Oral presentations at NASA AMSR science team meetings: 2013, 2014, 2015, 2016
- Poster presentation at A-Train Symposium, Pasadena, April 2017

Teaching

- Teaching assistant for ATS622 Atmospheric Radiation
- Teaching assistant for ATS652 Atmospheric Remote Sensing

Programming

- High proficiency with IDL, Fortran 90, and Unix
- Moderate proficiency with shell scripts, Excel, and C
- Familiarity with Python and Matlab

Miscellaneous

- Member of NASA AMSR2 science team, algorithm lead for AMSR2 Ocean Suite
- Member of the User Working Group for NASA's Global Hydrology Resource Center, Huntsville AL, 2014-16
- Atmospheric Science department graduate student representative, 2012-13 and 2015-16
- Recipient of CSU College of Engineering 2015 Shrake-Culler Scholarship
- Participant in the JCSDA summer colloquium on satellite data assimilation 2015

References

Professor Christian Kummerow, Department of Atmospheric Science at Colorado State University, Director of Cooperative Institute for Research in the Atmosphere (CIARA)
Email: kummerow@atmos.colostate.edu
Phone: (970) 491-7473

Dr. Wesley Berg, Senior Research Scientist, Department of Atmospheric Science at Colorado State University
Email: berg@atmos.colostate.edu
Phone: (970) 207-0724

Publications

- Duncan, D. I., C. D. Kummerow, and G. S. Elsaesser, 2014: A Lagrangian analysis of deep convective systems and their local environmental effects. *J. Climate*, **27**, 2072–2086, doi: 10.1175/JCLI-D-13-00285.1.
- Duncan, D. I. and C. D. Kummerow, 2016: A 1DVAR retrieval applied to GMI: Algorithm description, validation, and sensitivities. *J. Geophys. Res. Atmos.*, **121**, 7415-7429, doi:10.1002/2016JD024808.
- Duncan, D. I., C. D. Kummerow, and W. M. Meier, 2017: An integrated examination of AMSR2 products over ocean. *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, doi:10.1109/JSTARS.2017.2718535.
- Duncan, D. I., C. D. Kummerow, B. Dolan, and V. Petkovic: Towards variational retrieval of warm rain from passive microwave observations. *J. Geophys. Res. Atmos.*, in review.