

## Stefan N. Tulich

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### **Education:**

Ph.D. Atmospheric Science, Colorado State University, 2003  
M.S. Atmospheric Science, Colorado State University, 1998  
B.S. Physics, University of Miami, 1995

### **Employment:**

Research Scientist II (0.5-1.0 FTE), Cooperative Institute for Research in Environmental Sciences,  
University of Colorado, Boulder, CO. January, 2007-present.

Visiting Postdoctoral Scientist II (0.5-0.1 FTE), National Center for Atmospheric Research,  
Boulder, CO. January, 2007-October 2011.

Research Scientist I, Cooperative Institute for Research in Environmental Sciences,  
University of Colorado, Boulder, CO. July, 2004-January, 2007.

Teaching Faculty, Department of Physics,  
California State University, Bakersfield, CA. January, 2004-July, 2004.

Research Assistant, Department of Atmospheric Sciences,  
Colorado State University, Fort Collins, CO. July, 1995-December, 2003.

### **Teaching Experience:**

Instructor, Department of Physics, California State University at Bakersfield.  
Physics 201, "Basic Principles of Newtonian Physics". January-March, 2003;  
Physics 110, "Astronomy", April-June, 2003.

Teaching Assistant, Department of Atmospheric Sciences, Colorado State University.  
AT 605, "General Circulation of the Atmosphere", December-May, 1999.

### **Sponsored Research Projects:**

NSF ATM-0806553: **Mechanisms of convection-wave interactions.** July, 2008-present; Lead PI: S. Tulich;  
Co-PI: G. Kiladis (NOAA/ESRL); Supported graduate student: Emily Riley (Univ. of Miami); Amount Awarded:  
~\$450K over 3 years.

NOAA Modeling Analysis and Prediction Program: **Towards improving convection parameterization and the  
MJO in next-generation climate models.** August, 2011-present; Lead PI: S. Tulich; Co-PIs: J. Bacmeister  
(NCAR), M. Zhao (UCAR/GFDL), W. Putman (NASA/GSFC), M. Suarez (NASA/GSFC), Amount Awarded:  
~\$750K over 3 years.

### **Proposals under review:**

NOAA Earth System Science Program: **Atmosphere-ocean interactions and tropical cloud populations:  
From shallow convection to the MJO.** August, 2012-Sept, 2015; Lead PI: W. Grabowski (NCAR/MMM); Co-PI:  
S. Tulich, Amount requested: ~\$521K over 3 years.

NSF Climate and Large-scale Dynamics: **Collaborative research: Tropical waves and intertropical  
convergence zones in simulations with explicit convection.** Jan, 2011-Feb, 2014; Lead PI: S. Tulich; Co-PI:  
D. Nolan, Amount requested: ~\$280K over 3 years.

**Publications:**

- Tulich, S. N.** and G. N. Kiladis, 2011: Long-lived squall lines and convectively coupled gravity waves in the tropics: Why do most cloud systems travel westward? *J. Atmos. Sci.*, (in review).
- Dias, J., **S. N. Tulich**, and G. N. Kiladis, 2011: An object-based approach to assessing the organization of tropical convection. *J. Atmos. Sci.*, (in review).
- Riley, E. M., B. E. Mapes, and **S. N. Tulich**, 2011: Clouds associated with the MJO: A new perspective from *CloudSat*. *J. Atmos. Sci.*, 68, 3032-3051.
- <sup>1</sup>**Tulich, S. N.**, G. N. Kiladis, and A. Suzuki-Parker, 2011: Convectively-coupled Kelvin and easterly waves in a regional climate simulation of the tropics. *Clim. Dyn.*, 36, 185-203.
- <sup>2</sup>**Tulich, S. N.** and B. E. Mapes, 2010: Transient environmental sensitivities of explicitly simulated tropical convection. *J. Atmos. Sci.*, 67, 923-940.
- Mapes, B. E., **S. N. Tulich**, T. Nasuno, and M. Satoh, 2008: Predictability aspects of global aqua-planet simulations with explicit convection. *J. Meteor. Soc. Japan*, 86A, 175-185.
- <sup>3</sup>**Tulich, S. N.** and B. E. Mapes, 2008: Multiscale convective wave disturbances in the tropics: Insights from a two-dimensional cloud-resolving model. *J. Atmos. Sci.*, 65, 140-155.
- Tulich, S. N.**, D. A. Randall, and B. E. Mapes, 2007: Vertical-mode and cloud decomposition of large-scale convectively coupled gravity waves in a two-dimensional cloud-resolving model. *J. Atmos. Sci.*, 64, 1210-1229.
- Mapes, B. E., **S. N. Tulich**, J.-L. Lin, and P. Zuidema, 2006: The mesoscale convective life cycle: Building block or prototype for large-scale tropical waves. *Dyn. Atmos. Oceans*, 42, 3-29.
- Haertel, P. T., R. H. Johnson and **S. N. Tulich**, 2001: Some simple simulations of thunderstorm outflows. *J. Atmos. Sci.*, 58, 504-516.

**Selected reprint links:**

- 1: <http://www.springerlink.com/content/av633173182mvx88/>
- 2: <http://journals.ametsoc.org/doi/abs/10.1175/2009JAS3277.1>
- 3: <http://journals.ametsoc.org/doi/abs/10.1175/2007JAS2353.1>