

## KATE M. CERULLY

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Atlanta, Georgia 30332

404-295-9633  
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### EDUCATION

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Georgia Institute of Technology Atlanta, GA  
*Ph.D. in Chemical and Biomolecular Engineering, Minor in Atmospheric Sciences* 8/08-present

- **Honors:** 2012 Air and Waste Management Association Georgia Chapter scholarship; Accepted to first NASA Student Airborne Research Program
- **Leadership Positions:** Nenes Group lab safety manager; Nenes Group lab outreach coordinator; Teaching assistant in heat and mass transfer - four semesters; Department liaison for Women in Engineering program; Secretary and first year representative for Association of Chemical Engineering Graduate Students
- **Study Abroad:** INNOVATE Technology and Globalization Conference in Vietnam and Taiwan

University of Pittsburgh Pittsburgh, PA  
*B.S. in Chemical Engineering, Minor in Chemistry* 5/08

- **Honors:** Outstanding freshmen leadership three year tuition scholarship; School of Engineering Alumni Student Leadership Award Finalist; John W. Tierney Award for Chemical Engineers; University of Pittsburgh study abroad scholarship
- **Leadership Positions:** Campus programming chair; Resident assistant; Freshmen director of activities for Engineering Student Council; Treasurer for American Institute of Chemical Engineers student chapter
- **Study Abroad:** Plus3 program for engineering and business students in Brazil

### WORK AND RESEARCH EXPERIENCE

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Georgia Institute of Technology Atlanta, GA  
*Research Assistant* 8/08-present

- **Innovation:** Designed and built new instrumentation, including electrical systems and LabVIEW acquisition programs, to advance understanding of semi-volatile aerosol impacts on cloud formation
- **Communication:** Presented results at conferences and in peer-reviewed journals
- **Teamwork:** Collaborated with the Carnegie Mellon University Center for Atmospheric Particle Studies in order to analyze particle chemistry evolution
- **Analytical skills:** Completed real-time calculations in the field to monitor and optimize instrument operating parameters during the NOAA CalNEX and SOAS field missions
- **Leadership:** Oversaw the training and research of three undergraduate students

NASA Student Airborne Research Program Irvine, CA  
*Research Participant* 7/09-8/09

- **Problem Solving Skills:** Worked with Dr. Don Blake and 1995 Nobel Prize winner Dr. Sherwood Rowland to measure atmospheric gas concentrations
- **Analytical Skills:** Developed and piloted research hypotheses involving the collection of gas samples aboard a NASA aircraft
- **Communication:** Synthesized and presented results quickly to NASA personnel

PPG Industries, Inc. Natrium, WV  
*Process Control Intern* 6/07-8/07

- **Analytical Skills:** Proposed and developed ROI analysis for implementation of new equipment resulting in annual savings of \$25,000 by modeling optimized processes based on known and estimated parameters

Schlumberger  
Wireline Field Engineer Intern

Victoria, TX  
6/06-8/06

- **Adaptability:** Made multi-day well testing excursions to oil rigs throughout south Texas

## ADDITIONAL INFORMATION

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- **Outreach:** Provide childcare for special-needs children; Certified in CPR and basic first aid
- **Hobbies:** Active in tennis and local church community

## CONFERENCE PRESENTATIONS

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American Association for Aerosol Research (AAAR) Conference - 2010, 2011, 2012  
Georgia Tech Chemical and Biomolecular Engineering Symposium - 2012, 2013  
Georgia Tech Earth and Atmospheric Sciences Graduate Student Symposium - 2012  
Georgia Tech Research and Innovation Conference - 2012

## PUBLICATIONS

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- Cerully, K. M.**, Hite, J., McLaughlin, M., and Nenes, A. Towards the Determination of Joint Volatility-Hygroscopicity Distributions: Instrument Development and Response Characterization for Single-Component Aerosol, *Aeros. Sci. Tech.*, *in review*.
- Raatikainen, T., Nenes, A., Seinfeld, J. H., Morales, R., Moore, R. H., Latham, T. L., Lance, S., Padró, L. T., Lin, J. J., **Cerully, K.**, Bougiatioti, A., Cozic, J., Ruehl, C., Chuang, P. Y., Anderson, B., Flagan, R.C., Jonsson, H., Mihalopoulos, N., and Smith, J. N. (2013). Worldwide Data Sets Constrain the Water Vapor Uptake Coefficient in Cloud Formation, *Proc. Nat. Acad. Sci.*, 110:3760-3764, doi: 10.1073/pnas.1219591110.
- Moore, R.H., **Cerully, K.**, Bahreini, R., Brock, C. A., Middlebrook, A. M., and Nenes, A. (2012). Hygroscopicity and Composition of California CCN During Summer 2010 (2012), *J. Geoph. Res.*, 117:D00V12, doi:10.1029/2011JD017352 .
- Cerully, K. M.**, Raatikainen, T., Lance, S., Tkacik, D., Tiitta, P., Petaja, T., Ehn, M., Kulmala, M., Worsnop, D. R., Laaksonen, A., Smith, J. N., and Nenes, A. (2011) Aerosol Hygroscopicity and CCN Activation Kinetics in a Boreal Forest Environment during the 2007 EUCAARI Campaign, *Atmos. Chem. Phys.*, 11, 12369-12386, doi:10.5194/acp-11-12369-2011.
- Lack, D. A., Cappa, C. D., Langridge, J., Bahreini, R., Buffaloe, G., Brock, C., **Cerully, K.**, Coffman, D., Fahey, D. W., Hayden, K., Holloway, J., Lerner, B., Massoli, P., Li, S-M., McLaren, R., Middlebrook, A., Moore, R., Nenes, A., Nuaanan, I., Onasch, T., Peischl, J., Perring, A., Quinn, P., Ryerson, T., Schwartz, J. P., Spackman, R., Wofsy, S. C., Worsnop, D., Xiang, B., and Williams, E. (2011). Observed Changes in Climate and Air Quality – Relevant Shipping Emissions Due to Vessel Fuel Quality and Speed Regulation, *Env. Sci. Tech.*, 45:9052-9060, doi: 10.1021/es2013424.