

Curriculum Vitae

Jordan Joel Gerth
CIMSS/SSEC
University of Wisconsin at Madison
1225 West Dayton Street
Madison, Wisconsin 53706

Personal Information

Born December 1986; United States Citizen

Education

- 9/2005 to 5/2009** **University of Wisconsin at Madison**
College of Letters and Science Honors Program
Bachelor of Science (B.S.) with Comprehensive Honors and majors in Atmospheric and Oceanic Sciences, Mathematics, and Political Science
B.S. Thesis Information
Title: *A Review and Study of Land-Sea Interactions on the Great Lakes*
Advisor: Dr. Steven Ackerman
- 9/2009 to 12/2011** **University of Wisconsin at Madison**
College of Letters and Science Graduate School
Master of Science (M.S.), Atmospheric and Oceanic Sciences
M.S. Thesis Information
Title: *Improving Cloud and Moisture Representation by Assimilating GOES Sounder Products into Numerical Weather Prediction Initial Conditions*
Advisor: Dr. Steven Ackerman
- 9/2011 to Present** **University of Wisconsin at Madison**
College of Letters and Science Graduate School
Doctor of Philosophy (Ph.D.), Atmospheric and Oceanic Sciences
In Progress

Employment

- 9/2005 to 5/2009** **Undergraduate Student Researcher**
Cooperative Institute for Meteorological Satellite Studies (CIMSS)
Space Science and Engineering Center (SSEC)
University of Wisconsin at Madison
- 5/2009 to Present** **Graduate Project/Research Assistant**
Cooperative Institute for Meteorological Satellite Studies (CIMSS)
Space Science and Engineering Center (SSEC)
University of Wisconsin at Madison

Awards and Honors

- 2007** Wisconsin Space Grant Consortium Undergraduate Research Award
National Weather Association Meteorological Satellite Applications Award
- 2008** Wisconsin Space Grant Consortium Undergraduate Research Award
- 2009** Wisconsin Space Grant Consortium Graduate Fellowship Award

2010 Wisconsin Space Grant Consortium Graduate Fellowship Award

2011 Wisconsin Space Grant Consortium Graduate Fellowship Award

Research Statement

Mr. Gerth's primary area of interest is the translation of meteorological research, particularly in the field of remote sensing, into the operational forecasting environment, including the infusion of satellite imagery and products with numerical weather prediction models. His work involves strong coordination with National Weather Service forecast offices and the development of NWS technologies such as the Advanced Weather Interactive Processing System (AWIPS) to allow for smooth transitioning of new satellite products and imagery into operations.

Research Projects

Mr. Gerth has assisted with the following projects:

AWIPS Infusion into Academia/Research Sector, 2005 to 2007

Virtual Institute for Satellite Integration Training (VISIT) Development, 2005 to Present

Satellite-based Nowcasting and Aviation Application Program, 2006 to 2008

Using AWIPS to expand use of GOES Imager and Sounder products in National Weather Service Forecast Offices, part of GOES Improved Measurement and Product Assurance Plan (GIMPAP), 2008

GOES-R Proving Ground, 2008 to Present

JPSS Proving Ground, 2011 to Present

GOES Imager Sky Cover Analysis Product, part of GIMPAP, 2012 to Present

Recent Presentations

Copies of select presentations are available to download at <http://cimss.ssec.wisc.edu/~jordang/>

Best Practices for NWP: The Nexus of Satellite Observations and Initial Conditions
Talk, National Weather Association Annual Meeting—General Session VII (Tucson, Arizona)
October 5, 2010

AWIPS-II and GOES-R: When Updated Information Processing Systems and New Satellites Meet
Talk, National Weather Association Annual Meeting—General Session XI (Tucson, Arizona)
October 6, 2010

An Outline in Transferring Satellite Research Products to National Weather Service Operations
Talk, American Meteorological Society Annual Meeting—1st R2O Conference (Seattle, Washington)
January 27, 2011

The Magic of Moisture in Numerical Weather Prediction
Talk, National Weather Association Annual Meeting—General Session V (Birmingham, Alabama)
October 18, 2011

How AWIPS II will bring GOES-R Capabilities and Science to the Field, both Pre- and Post-Launch
Talk, National Weather Association Annual Meeting—Joint NWA/GUC Session I (Birmingham, Alabama)
October 20, 2011

Field Experience

5/2009, 6/2010, 6/2011 NOAA Hazardous Weather Testbed Spring Experiment
Role: Visiting Satellite Meteorologist
Storm Prediction Center, National Weather Center, Norman, OK

Teaching Experience

7/2009 *MODIS DB Data for Forecasting and Real-Time Environmental Decision-Making*
 Role: Teaching Assistant for IGARSS 2009 Short Course
 Dept. of Geology, Stellenbosch University, Stellenbosch, South Africa

Professional Membership

Current or Previous Leadership Roles at National Level

American Meteorological Society

- Committee on Satellite Meteorology, Oceanography, and Climatology
 - Student Member (2009 through 2014)

National Weather Association

- Council
 - Student Ex-Officio Member (2011 through 2013)
- Professional Development Committee
 - Member (2009 through 2014)
- Program Committee – 2012 Annual Meeting
 - Chair (2010 through 2012)

Current or Previous Leadership Roles at Local Level

National Weather Association

- Southern Wisconsin Chapter (Alpha Pi)
 - Founder (2010 and 2011)
 - President (2012 and 2013)

Membership Only

IEEE Graduate Student Member

Related Experience

Mr. Gerth has participated in on-site research to operations coordination exercises with more than half a dozen National Weather Service forecast offices throughout the country since 2006, and contributes to related teams and working groups both internally and externally to his organization for project success. From 2003 through 2005, he served as a student assistant at the NWS field office in Milwaukee, Wisconsin.

He has knowledge of multiple computing languages, including C/C++, Java, Perl, Python, and FORTRAN, numerical techniques, and data formats, including GRIB/GRIB2, HDF, KML/KMZ, and netCDF, as well as experience using IDL and MATLAB for research projects. He also has used, developed, and enhanced Linux-based atmospheric science software applications, led technical interchange meetings on software development, and has experience in software governance, process automation, and web design.

He has led 20-minute weather briefings at the University of Wisconsin approximately twice weekly since 2009, and has provided weather forecasts to UW-Police for special events on campus.

Advisors

Dr. Steven Ackerman, a professor of atmospheric and oceanic sciences at the University of Wisconsin, has served as Mr. Gerth's academic advisor since 2005. Mr. Robert Aune, a NOAA/NESDIS research meteorologist stationed at CIMSS, is his research advisor.