

**Sixteenth Annual
Iowa State University
Atmospheric Science
Undergraduate Research Symposium**

**3140 Agronomy Hall
Iowa State University**

8 December 2008

The Senior Thesis Program is designed to provide in-depth experience with guided professional inquiry for all atmospheric science graduates. The program consists of original research done in collaboration with a mentor who may be a faculty member or other professional meteorologist or researcher. The students' findings are reported in the written theses and are presented orally at the Iowa State University Atmospheric Science Undergraduate Research Symposium. All presentations are open to the general public. Faculty, Staff, and Students are encouraged to attend. Parents, family, and friends, of presenters are especially welcome.

9:10	SYMPOSIUM OPENING REMARKS	1:10	Effects of the North Pacific Short-Wave Train and the Pacific-North American Teleconnection Pattern on North American Weather During Winter Seasons of Cold ENSO Events James Lawler Mentor: T.C. (Mike) Chen
9:20	Simulating the Synoptic Climatology of Extreme Precipitation Events Sho Kawazae Mentor: William Gutowski	1:30	National Hurricane Center and Model Verification of Landfalling Hurricanes from 2003 to 2007 Ben McNeill Mentor: T.C. (Mike) Chen
9:40	Dew Point Temperature Trends Associated with Synoptic Regime Changes in Iowa Adam J. Deppe Mentors: David Flory and Karl Jungbluth	1:50	The Relation Between Interannual Variations of the U.S. Southwest Monsoon Quest and Snow Amount over the U.S. Mountain States Suzanne H. Morris Mentor: T.C. (Mike) Chen
10:00	A Climatology of Severe Weather Reports as a Function of Storm Morphology Jeff Duda Mentors: William Gallus, N.A. Snook, and E.V. Johnson	2:10	Dynamics and Upper-Air Flow Pattern of Floods in the Central Plains Matt Perry Mentor: Ross Hays, Jr.
10:20	Enhancing Precipitation by the Use of Hygroscopic Flares Jeff Edmondson Mentor: S. Tessendorf and X. Wu	2:30	BREAK
10:40	BREAK	2:50	Synoptic Environments Associated with Significant Tornadoes in the Contiguous United States Jayson Prentice Mentor: Jeremy S. Grams
11:00	Environmental Differences between Bow Echoes and Trailing Stratiform Squall Lines Blake Hamilton Mentor: William Gallus	3:10	A Comparison of the Partial Thickness Technique and the Bourgoin Technique Through Bufkit Output Logan Karsten Mentors: William Gallus and C. Karstens
11:20	Correlation Between Updraft Strength and Tornado Intensity Using Gibson Ridge Level 2 Analyst Edition Justin T. Schultz Mentors: Karl Jungbluth and T.C. (Mike) Chen	3:30	Winter QPF Verification in the Upper Mississippi River Valley Using the Method for Object-Based Diagnostic Evaluation Benjamin R. J. Schwedler Mentor: Benjamin W. Moyer
11:40	Does Precipitation Break Out Faster Than Forecasted in Warm Air Advection Situations in the Upper Great Plains During the Cold Season? J. Lawrence Davis Mentor: William Gallus	3:50	Aviation Climatology Michelle Werness Mentors: Ray Wolf and Brea Lisko
12:00	LUNCH BREAK	4:10	SYMPOSIUM CLOSING REMARKS