

Israel L. Jirak

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Curriculum Vitae
September 2007

Education

- August 2005 **Ph.D.** **Department of Atmospheric Science, Colorado State University**
Dissertation: "Observational Analysis of the Predictability of Mesoscale Convective Systems"
Advisor: William R. Cotton
- June 2002 **M.S.** **Department of Atmospheric Science, Colorado State University**
Thesis: "Satellite and Radar Survey of Mesoscale Convective System Development"
Advisor: William R. Cotton
- May 2000 **B.S.** **Atmospheric Science**
Department of Physics and Astronomy, University of Kansas
With Honors and Highest Distinction
Advisor: Donna F. Tucker

Professional Experience

- 2007 - present **Assistant Professor**
Department of Meteorology, Embry-Riddle Aeronautical University – Prescott, AZ
Courses: Forecasting Techniques, Satellite and Radar Weather, Aviation Weather
Research Focus: Mesoscale convective systems, North American monsoon
- 2006 - 2007 **Research Scientist I**
Department of Atmospheric Science and CIRA, Colorado State University
Research Focus: Synoptic and mesoscale meteorology: analysis & modeling
- 2005 - 2006 **Postdoctoral Fellow**
Department of Atmospheric Science and CIRA, Colorado State University
Research Focus: Forecasting and modeling mesoscale convective systems
- 2000 - 2005 **Graduate Research Assistant**
Department of Atmospheric Science, Colorado State University
Research Focus: Synoptic & mesoscale meteorology, weather analysis & forecasting
- 2001 - 2003 **Graduate Teaching Assistant**
Department of Atmospheric Science, Colorado State University
Courses: Daily Weather Laboratory I (AT 540) – Fall 2003 – co-instructor
Introduction to Weather and Climate Lab (AT 351) – Spring 2003 – instr.
Introduction to Weather and Climate (AT 350) – Spring 2003 – TA
Daily Weather Laboratory I (AT 540) – Fall 2001 – TA
Role: Prepared and presented lectures, developed original assignments and exams

1999 - 2000 **Undergraduate Research Assistant**
Department of Physics and Astronomy, University of Kansas
Research Focus: Improvement of terminal area forecasts

Awards and Honors

2003 **Herbert Riehl Memorial Award**
Department of Atmospheric Science, Colorado State University
Best published manuscript by a graduate student

2000-2003 **National Science Foundation Graduate Fellowship**

2000 **Outstanding Senior in Atmospheric Science**
Department of Physics and Astronomy, University of Kansas

1999 **Dr. Pedro Grau Undergraduate Scholarship**
American Meteorological Society

Peer-Reviewed Scientific Publications

Jirak, I. L. and W. R. Cotton, 2007: Sensitivity of MCS development to the initial convective arrangement. *Mon. Wea. Rev.*, in preparation.

Jirak, I. L. and W. R. Cotton, 2007: Observational analysis of the predictability of mesoscale convective systems. *Wea. Forecasting*, **22**, 813-838.

Jirak, I. L. and W. R. Cotton, 2005: Effect of air pollution on precipitation along the Front Range of the Rocky Mountains. *J. Appl. Meteor.*, **45**, 236-245.

Jirak, I. L., W. R. Cotton, and R. L. McAnelly, 2003: Satellite and radar survey of mesoscale convective system development. *Mon. Wea. Rev.*, **131**, 2428-2449.

Additional Scientific Publications

Jirak, I. L. and W. R. Cotton, 2007: Impact of the initial convective arrangement on simulated MCS development. Preprints *12th Conf. on Mesoscale Processes*, Waterville Valley, NH, Amer. Meteor. Soc., 5 pp.

Jirak, I. L. and W. R. Cotton, 2006: Sensitivity of MCS development to the initial convective arrangement. Preprints *23rd Conf. on Severe Local Storms*, St Louis, MO, Amer. Meteor. Soc., 5 pp.

Jirak, I. L., 2005: Observational analysis of the predictability of mesoscale convective systems. Atmos. Sci. Paper No. 778, Colorado State University, 132 pp.

Jirak, I. L., W. R. Cotton, and W. L. Woodley, 2004: Effect of air pollution on precipitation along the Front Range of the Rocky Mountains. Preprints *16th Symposium on Planned and Inadvertent Weather Modification*, San Diego, CA, Amer. Meteor. Soc., 4 pp.

Jirak, I. L. and W. R. Cotton, 2004: Environmental precursors to mesoscale convective system development. Preprints *22nd Conf. on Severe Local Storms*, Hyannis, MA, Amer. Meteor. Soc., 4 pp.

Jirak, I. L., W. R. Cotton, and R. L. McAnelly, 2002: Radar survey of mesoscale convective system development. Preprints *21st Conf. on Severe Local Storms*, San Antonio, TX, Amer. Meteor. Soc., 50-53.

Jirak, I. L., 2002: Satellite and radar survey of mesoscale convective system development. Atmos. Sci. Paper No. 727, Colorado State University, 119 pp.

Oral Presentations

- 2007 Invited panelist at EPA PM Secondary NAAQS kickoff meeting, Chapel Hill, NC
- 2007 Invited presentations at St. Louis University and Embry-Riddle Aeronautical University - Prescott
- 2006 American Meteorological Society 23rd Conference on Severe Local Storms, St. Louis, MO
- 2006 Invited presentations at Purdue University, University of Illinois, University of Nebraska-Lincoln, and Texas A&M University
- 2004 Rocky Mountain Hydrologic Research Center 59th Annual Meeting, Boulder, CO
- 2004 American Meteorological Society 22nd Conference on Severe Local Storms, Hyannis, MA
- 2003 Department of Atmospheric Science, Colorado State University - Herbert Riehl Memorial Award Ceremony, Fort Collins, CO

Reviewer

- 2004 - present *Meteorology and Atmospheric Physics, Journal of Applied Meteorology, Weather and Forecasting*

Professional Affiliations

- 2002 - present **American Meteorological Society**

Professional References

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|--|---|
| William R. Cotton, Ph.D.
Principle investigator
Graduate research advisor
Graduate teaching supervisor | Department of Atmospheric Science
Colorado State University
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E-mail: cotton@atmos.colostate.edu |
| Steven A. Rutledge, Ph.D.
Graduate research committee member
Graduate teaching supervisor | Department of Atmospheric Science
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