

JENNA C. MCPHEE

Department of Geography and Regional Development
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EDUCATION

University of Arizona, Tucson, AZ
M.A. Candidate, Geography
Thesis topic: Downscaling climate predictions for local applications
Advisor: Dr. Andrew C. Comrie
Current GPA: 4.0

The Pennsylvania State University, University Park, PA
B.S. in Meteorology, May 2003
Minor in Climatology (Geography)
GPA 3.56

AREAS OF SPECIALIZATION

Applied Climatology, Climate Services, Global Change, Drought, Quantitative Methods, Spatial and Temporal Analysis, Geographic Information Systems (GIS), Empirical-statistical downscaling

EMPLOYMENT

Research Assistant July 2003 - present
The Climate Assessment for the Southwest Project (CLIMAS), Institute for the Study of Planet Earth,
Department of Geography and Regional Development, University of Arizona, Tucson, AZ

- Performed stakeholder driven research and developed outreach products on drought in the Southwest for CLIMAS.
- Served on a drought focal committee assisting the Arizona Governor's Drought Task Force and various stakeholders in the Southwest region.
- Performed historical drought analyses for Arizona and compiled information into a comprehensive report published by CLIMAS (see web link under publications).
- Developed focus page for the September 2004 CLIMAS monthly newsletter "Southwest Climate Outlook" on the El Nino precipitation signal in the SW.
- Participated and contributed valuable climatological research to a regional integrated assessment project as part of the CLIMAS team.
- Currently working on a research / outreach project on downscaling large-scale climate forecasts to apply at the local level, in partnership with the NWS-WFO Tucson and the Arizona Cooperative Extension Climate Science Applications Program.

Student Trainee Meteorologist, May 2002 - May 2003
Student Career Experience Program (SCEP)
National Weather Service-Weather Forecast Office, State College, PA

- Trained for three positions at the Weather Forecast Office, including hydrometeorological technician, general forecaster, and aviation forecaster.
- Performed data acquisition, quality control, recordings and publication of NWS products.

- Created and disseminated zone forecasts to the general public.
- Produced Terminal Aerodrome Forecasts for aviation purposes and short-term forecasts.
- Utilized the NWS AWIPS software and programs to create and distribute NWS forecast and climate products.
- Practiced public service, communication, and team-working skills on a daily basis.
- Performed a local research study on the North Atlantic Oscillation and winter weather in Pennsylvania.
- Completed several forecaster development program training modules.

KNOWLEDGE & ABILITIES

Computer Languages: working knowledge in C++, Perl, Matlab Scripting, and SQL

Applications: proficient in MS Office; knowledgeable in GIS and Matlab; familiar with SPSS; web design using Dreamweaver, working knowledge in Splus

Operating Systems: experience with MS Windows, UNIX, and NWS AWIPS

Quantitative methods: descriptive / inferential statistics, multivariate statistics, regression analysis, spatiotemporal data analysis, eigenvector techniques, empirical-statistical downscaling, etc.

Relevant Coursework: (* graduate level, ** both undergraduate and graduate levels)

Intro to Weather Analysis & Forecasting	Spatial Analysis*
Atmospheric Thermodynamics	Spatiotemporal Data Analysis*
Intro to Atmospheric Science	Geographic Information Systems**
Atmospheric Physics I: Radiative Transfer	Observational Meteorology
Atmospheric Physics II: Cloud Physics	Geology of Climate Change
Synoptic Meteorology	Satellite Climatology
Dynamic Meteorology I & II	Earth Futures
Applications of Computers to Meteorology	Weather Communications I
Statistical Analysis in Earth Science	Global Change*
Statistical Techniques in Geography*	Hydroclimatology*
Undergraduate Independent Research	Drought in the Southwest Seminar*

PUBLICATIONS

McPhee, J.C., A.C. Comrie, and G.M. Garfin. (2004) "Drought and Climate in Arizona: Top Ten Questions and Answers." *CLIMAS*, Institute for the Study of Planet Earth, University of Arizona.
[<http://www.ispe.arizona.edu/climas/learn/drought/Drought%20Q&A.pdf>]

SCHOLARLY PRESENTATIONS

McPhee, J.C., Comrie, A.C., and Garfin, G.M. (2004) "A Climatology of Drought for Arizona: An Example of Stakeholder Outreach". Poster Presentations at:

- 1) Annual Meeting of the American Meteorological Society, Seattle WA, January 2004.
- 2) Annual Meeting of the Association of American Geographers, Philadelphia PA, March 2004.
- 3) The 21st Annual Pacific Climate Workshop on Climate Variability of the Eastern North Pacific and Western North America, Monterey CA, March 2004.

McPhee, J.C. and Comrie, A.C. (2005) "Downscaling Climate Predictions for Local Applications".

- 1) Climate Prediction Applications Science Workshop, Palisades NY, March 2005.
- 2) Annual Meeting of the Association of American Geographers, Denver CO, April 2005.

GRANTS

2005: Institute for the Study of Planet Earth Travel Grant (\$350)
2005: Department of Geography and Regional Development Travel Award (\$350)
2004: Graduate and Professional Student Council Travel Grant (\$500)
2004: Institute for the Study of Planet Earth Travel Grant (\$400)
2003: Department of Geography and Regional Development Travel Award (\$350)
2003 – 2004: Graduate Fellowship, Department of Geography and Regional Development,
University of Arizona (\$4,000)

AWARDS

1999 – 2003(5 of 8 semesters): Dean's List, College of Earth and Mineral Sciences, The Pennsylvania State University
2002 – 2003: P. Stuart Tholan and Marilyn B. Tholan Scholarship (\$1941)
2001 – 2002: Earth and Mineral Science scholarship
2000 – 2001: John and Elizabeth Holmes Teas Scholarship (\$1920)

SERVICES & ACTIVITIES

2004 – 2005: Treasurer, Southern Arizona Geographical Association
2001 – 2003: Campus Weather Service Radio, Penn State Meteorology
2001 – 2002: National Collegiate Weather Forecasting Contest
2000 – 2001: Campus Activities Board, PSU Berks Campus
2000: The Lion's Tale, PSU Berks Campus Newspaper

AFFILIATIONS

2003 – present: Association of American Geographers
2003 – present: Southern Arizona Geographical Association
2002 – present: American Meteorological Society
2002 – present: Chi Epsilon Pi Meteorology Honors Society, Penn State
2001 – present: Golden Key International Honor Society

REFERENCES

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