

## **MICHAEL T. RITSCHKE**

Climate Research Section  
Environmental Science Division  
Argonne National Laboratory

### **Education:**

M.S.                    Geography, Northern Illinois University, 2001  
B.S.                    Meteorology, Northern Illinois University, 1997

### **Professional Experience:**

2001-Present      Scientific Associate  
                         Environmental Science Division  
                         Argonne National Laboratory

Responsible for all aspects of the Atmospheric Radiation Measurement (ARM) program's surface meteorological networks as a member of the program's instrument team. Develops and installs new meteorological measurement systems, and upgrades and improves existing surface meteorological equipment. Conducts field experiments related to micro-meteorological studies.

### **Summary of Previous Experience:**

1999-Present      Department of Geography, Northern Illinois University, DeKalb, IL

Develops lectures, tests and laboratory exercises for students in 105A Introduction to the Atmosphere and 430 Micro-Meteorology and Instrumentation. Evaluates students in lecture and laboratory sections.

2000-2001        DeKalb County Government, Sycamore, IL

Developed enterprise GIS for the County using MGE and Microstation. Assisted in the migration from a cadastral environment to GeoMedia Professional.

1998-2000        Department of Geography, Northern Illinois University, DeKalb, IL

Produced JPG images for use in a GIS for Edgar Co., IL, and Carroll Co., IL using Arc/Info, 7.1.2 (UNIX) and Microstation to process USGS DOQS (digital orthophoto quarter quads). Digitized over TIF and JPG images.

1996-1998                      Advanced Farming Systems, Case Corporation, Burr Ridge, IL

Designed, installed, and responsible for two surface meteorology networks consisting of tipping bucket rain gages and tripod weather stations. Evaluated the data using spatial interpolation methods. Evaluated Doppler radar data using statistical methods.

1995-1996                      Dept. of Geography, Northern Illinois University, DeKalb, IL

Responsible for daily collection and dissemination of surface meteorological data to the NWS every day of the year. Responsible for maintaining the site and sensors in good working order. Responsible for calculating annual and 100-year statistical climate summaries and providing monthly statistical weather summaries to subscribers and by request.

1984-1988                      United States Air Force

As Weather Specialist, observed, encoded and disseminated visually and electronically measured weather variables. Operated and performed operator maintenance on electronic weather sensors and readouts used to measure weather elements. Disseminated weather warnings and weather advisories. Tactical Training Monitor responsible for training all personnel on tactical weather operations. Highest rank obtained: E-4/Sergeant.

**Research Interests:**

Surface meteorological instrumentation

Remote sensing for use in studies pertaining to surface boundary layer energy exchange, turbulence, and diffusion

Applications of climate information

Geographic Information System methodologies for displaying meteorological variables and model results

Global climate change

Atmospheric chemistry

Role of phenomenon, such as the Pacific Decadal Oscillation and North Atlantic Oscillation on climate variability

**Professional Activities:**

American Meteorological Society

Adjunct Faculty, Department of Geography, Northern Illinois University

**Publications:**

Author or co-author of 15 journal, report, and conference publications and presentations.