KIERAN T. BHATIA

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Education

University of Miami, Rosenstiel School of Marine & Atmospheric Science, Key Biscayne, FL
Ph.D. in Meteorology and Physical Oceanography, completed October, 2015.
Advisor: David Nolan.
Thesis: Tropical Cyclone Intensity Forecast Error Predictions and Their Applications.

University of Maryland, College Park, MD
B.S., Physics (meteorology track), *cum laude*, Class of 2010
University Honors Citation

Peer-Reviewed Publications

- Bhatia, Kieran T., and David S. Nolan, 2015. Prediction of Intensity Model Error (PRIME) For Atlantic Basin Tropical Cyclones. *Wea. Forecasting,* **30**, 1845-1865.
- Bhatia, Kieran T., and David S. Nolan, 2013: Relating the Skill of Tropical Cyclone Intensity Forecasts to the Synoptic Environment. *Wea. Forecasting*, **28**, 961–980.
- Nolan, David S., Robert Atlas, Kieran T. Bhatia, and Lisa R. Bucci, 2013: Development and validation of a hurricane nature run using the Joint OSSE Nature Run and the WRF model. *J. Adv. Earth. Model. Syst., **5***, 1-24.

Other Publications

- Co-author for chapter on "The Hurricane Boundary Layer and Advanced Diagnostics for TC Predictions" in Indo-US Advanced Workshop and Colloquium on Modeling and Data Assimilation for Tropical Cyclone Predictions proceedings book (in press).
- Bhatia, Kieran T., "Frequently Asked Hurricane Questions: Understanding the Science of Prediction and Preparation in South Florida," South Dade Newsleader. June 26, 2015.
- Bhatia, Kieran T. "Hurricane Warning: Consume Rainbow Spaghetti with Caution." Online Blog. UM Rosenstiel School. July 16, 2014.

Research Experience

Postdoctoral Research Associate at Princeton University (March 2016 to present)

- Studying the effects of climate change on hurricane dynamics and impacts using GFDL HiFLOR Model

Graduate Research at University of Miami (2010 to 2015)- Miami, Florida

- Developed and implemented operational error predictions for the National Hurricane Center intensity forecast guidance models (available here: http://rammb.cira.colostate.edu/products/tc_realtime/season.asp?storm_season=2015)

Graduate Research at University of Miami (2011 to 2013)- Miami, Florida

- Validated a high-resolution WRF hurricane nature run for an Observing System Simulation Experiment (OSSE)

Paid Summer Internship at NOAA (2009)- Boulder, Colorado

- Created probabilistic medium-range evapotranspiration forecasts for the Coachella and Imperial Valleys in California

Paid Summer Internship at NOAA (2008)- Camp Springs, Maryland

- Applied a conditional bias correction to large-scale forecast fields in high resolution GFS and ECMWF models

Research Assistant at University of Maryland (Fall 2009 to Spring 2010)- College Park, Maryland

- Used TOMS and TOVS ozone data as a proxy for jet stream location to examine climate change's influence on the migration of the polar jet stream

Paid Research Assistant at University of Maryland (Spring 2008)- College Park, Maryland

- Analyzed data documenting the growing amount of Carbon Dioxide in the Earth's oceans

Paid Research Assistant at University of Maryland (Fall 2008)- College Park, Maryland

- Studied the effects of aerosols on convective processes

Research Assistant at University of Maryland (Spring 2007)- College Park, Maryland

- Investigated the effects of increased levels of Carbon Dioxide on global wind patterns

Awards

- AMS Banner Miller Award co-author (2016)
- Presidential Management Fellows (PMF) STEM Finalist (2016)
- Invited Speaker for the Natural Hazards Research and Applications Workshop (2015)
- Finalist for the AMS Congressional Science Fellowship (2015)
- Awarded NSF funding to attend AMS Summer Policy Colloquium (2014)
- Awarded NSF funding to attend World Weather Open Science Conference (2014)
- University of Miami Academic Excellence, Leadership, and Service Award (2014)
- Awarded NSF funding to attend Indo-US Advanced Workshop and Colloquium on Modeling and Data Assimilation for Tropical Cyclone Predictions (2012)
- Rosenstiel Alumni Fellowship (2010)
- Member of Phi Beta Kappa Honor Society (2010-present)
- AMS's Loren W. Crow Memorial Scholarship (2009)
- NOAA's Ernest F. Hollings Scholarship (2008)

Teaching Experience

- Teaching Assistant for undergraduate course, Atmospheric Dynamics I (Spring 2013)
- Teaching Assistant for undergraduate course, Survey of Modern Meteorology (Fall 2012)
- Teaching Assistant for Honors 100 at University of Maryland (Fall 2009)

Computer Skills

- Advanced in Matlab and LINUX/UNIX
- Intermediate in FORTRAN, IDL, GRADS, and Python

Conferences Attended

2016 AMS Conference on Hurricanes and Tropical Meteorology – San Juan, Puerto Rico

- Oral Presenter: Evaluation and Applications of the Prediction of Intensity Model Error (PRIME) Forecasting System
- Poster Presenter: Tropical Cyclone Intensity Model Improvement: Better Models or Easier Forecasts?

2015 AGU Annual Conference– San Francisco, California

- Poster Presenter: Evaluation and Applications of the Prediction of Intensity Model Error (PRIME) Forecasting System

2015 Interdepartmental Hurricane Conference – Miami, Florida

- Oral Presenter: Guidance on Intensity Guidance

2014 World Weather Open Science Conference – Montreal, Canada

- Oral Presenter: Prediction of Tropical Cyclone Intensity Forecast Error

2014 AMS Summer Policy Colloquium – Washington D.C.

- NSF Funded Participant

2014 AMS Conference on Hurricanes and Tropical Meteorology – San Diego, California

- Oral Presenter: Prediction of Tropical Cyclone Intensity Forecast Error

2014 Interdepartmental Hurricane Conference – Miami, Florida

- Oral Presenter: Prediction of Tropical Cyclone Intensity Forecast Error

2012 AMS Annual Conference - New Orleans, Louisiana

- Oral Presenter: Predicting the Performance of Tropical Cyclone Intensity Forecasts Using Environmental Parameters

2012 AMS Conference on Hurricanes and Tropical Meteorology – Jacksonville, Florida

- Oral Presenter: Predicting the Performance of Tropical Cyclone Intensity Forecasts Using Environmental Parameters

2012 Indo-US Advanced Workshop and Colloquium on Modeling and Data Assimilation for Tropical Cyclone Predictions – Bhubaneswar, India

- NSF Funded Participant