Biography of Fuqing Zhang

Dr. Fuqing Zhang is a professor in the Department of Meteorology and Department of Statistics at the Pennsylvania State University. He also directs the Penn State Center on Advanced Data Assimilation and Predictability Techniques. He has made major contributions to the fundamental understanding of atmospheric dynamics and predictability, and he *has revolutionized the analysis and prediction of severe weather and hurricanes through incorporating high-resolution radar and satellite observations into cloud-resolving, state-of-the-art numerical weather prediction models with advanced ensemble-based data assimilation methodologies that have been widely adopted by NOAA, and other agencies and researchers in the world*.

He has authored over 200 peer-reviewed journal publications with a h-index of 51 and has given over 270 invited or keynote talks at various institutions and professional meetings. He has given congressional briefings on science's impacts on weather prediction and economy, and his research has been featured in published interviews by *Nature*, *Science*, *Reuters*, *Washington Post*, and other science or media outlets. He is one of the three editors for the most recent, 6-volume edition of the *Encyclopedia of Atmospheric Sciences,* along with editorship for various journals including *Monthly Weather Review, Atmospheric Science Letters, Journal of Meteorological Research, and Science China*. He also served on various advisory boards and expert panels for numerous organizations which include NSF, NASA, NOAA, UK Met Office, Office of Naval Research, American Meteorological Society, WMO, and National Academies, as well as serving as consultant for several weather-related private businesses. He has mentored more than 50 graduate students and postdoctoral scholars who are now becoming leaders in their respective professions including university professors, government researchers, and private-sector innovators.

He has received numerous awards for his research. Notably, in 2009, he was the sole recipient of the American Meteorological Society's 2009 **Clarence Leroy Meisinger Award** "*for outstanding contributions to mesoscale dynamics, predictability and ensemble data assimilation*." In 2015, he received the American Meteorological Society's **Banner I. Miller Award** "*for valuable insights into incorporating real-time airborne Doppler radar measurements via ensemble data assimilation, leading to improvements in forecasts of tropical cyclone track and intensity.*" Most recently, he is the 2018 recipient of the **Faculty Scholar Medal** in Physical Sciences at Penn State.

He is an **elected fellow** of both the American Meteorological Society and the American Geophysical Union. Other notable recognitions include being the 2015 **Rossby Fellow** of the International Meteorological Institute in Sweden, a **Houghton Lecturer** during his 2015 fall sabbatical at MIT, the **Nordenskjöld Lecturer** at University of Gothenburg in 2016, the 2017 **Burgers Keynote Lecturer** at University of Maryland, and the **GoCAS Distinguished Chair** to lead the 2018 Gothenburg Chair Programme for Advanced Studies in Sweden.