

**Ying-Hwa (Bill) Kuo Ph.D.**  
**Interim Director, UCAR Community Programs**

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### Education

*National Taiwan University*, Department of Atmospheric Sciences, Taipei City, Taiwan (R.O.C.), B.S. (1976)

*South Dakota School of Mines and Technology*, Department of Atmospheric and Environmental Sciences (Meteorology), Rapid City, South Dakota, M.S. (1979)

*Pennsylvania State University*, Department of Meteorology, State College, Pennsylvania, Ph.D. (1983)

### Experience Summary

2015 to Present Interim Director, UCAR Community Programs (UCP)  
2009 to Present Director, Developmental Testbed Center  
1997 to Present Director, COSMIC Program, UCP  
1995 to Present Senior Scientist, Mesoscale Prediction Group, NCAR/MMM  
1994 to 2012 Head, Mesoscale Prediction Group, NCAR/MMM  
2002 to 2008 Honorary Director, Institute of Urban Meteorology, CMA, Beijing  
1998 to 2002 Co-Chief Editor, Monthly Weather Review  
1989 to 1994 Scientist III, Mesoscale Prediction Section, NCAR/MMM  
1987 to 1989 Scientist II, Mesoscale Prediction Section, NCAR/MMM  
1986 to 1987 Scientist II, Mesoscale Research Section, NCAR/AAP  
1983 to 1986 Scientist I, Mesoscale Research Section, NCAR/AAP  
1982 to 1983 Scientific Graduate Student, Mesoscale Research Section

### Publications (more than 180 journal papers)

#### Five relevant publications:

- Kuo, Y.-H., X. Zou, W. Huang, 1997: The impact of GPS data on the prediction of an extratropical cyclone: An observing system simulation experiment. *J. Dyn. Atmos. Ocean.*, **27**, 439-470.
- Kuo, Y.-H., X. Zou, S.-J. Chen, W. Huang, Y.-R. Guo, R. Anthes, D. Hunt, M. Exner, and S. Sokolovskiy, 1998: A GPS/MET sounding through an intense upper-level front. *Bull. Amer. Meteor. Soc.*, **79**, 617-626.
- Kuo, Y.-H., T.-K. Wee, S. Sokolovskiy, C. Rocken, W. Schreiner, D. Hunt, R. A. Anthes, 2004: Inversion and error estimation of GPS radio occultation data. *J. Meteor. Soc. Japan*, **82**, 507-531
- Kuo, Y.-H., H. Liu, Y.-R. Guo, C.-T. Terng, and Y.-T. Lin, 2009: Impact of FORMOSAT-3/COSMIC data on typhoon and Mei-yu prediction. *Recent Progress in Atmospheric Sciences: Applications to the Asia-Pacific Region*, K.-N. Liou and M.-D. Chou, Eds, World Scientific Publishing Co., 458-483.
- Guo, P., Y.-H. Kuo, S. V. Sokolovskiy, D. H. Lenschow, 2011: Estimating atmospheric boundary layer depth using COSMIC radio occultation data. *J. Atmos. Sci.*, **68**, 1703-1713.

**Five significant publications:**

- Kuo, Y.-H., R.J. Reed, and Y. Liu, 1996: The ERICA IOP 5 storm. Part III: Mesoscale cyclogenesis and precipitation parameterization. *Mon. Wea. Rev.*, **124**, 1409-1434.
- Kuo, Y.-H., R. J. Reed, and S. Low-Nam, 1992: Thermal structure and airflow in a model simulation of an occluded marine cyclone. *Mon. Wea. Rev.*, **120**, 2280-2297.
- Kuo, Y.-H., S. V. Sokolovskiy, R. A. Anthes, and F. Vandenberghe, 2000: Assimilation of GPS radio occultation data for numerical weather prediction. *Terrestrial, Atmospheric and Oceanic Sciences*, **11**, 157-186.
- Kuo, Y.-H., W. S. Schreiner, J. Wang, D. Rossiter, Y. Zhang, 2005: Comparison of GPS Radio Occultation Soundings with Radiosondes. *Geophys. Res. Letter.*, **32**, L05817, doi:10.1029/2004GL021443.
- Fang, X., and Y.-H. Kuo, 2013: Improving ensemble-based quantitative precipitation forecasts for topography-enhanced typhoon heavy rainfall over Taiwan with a modified probability-matching technique. *Mon. Wea. Rev.*, **141**, 3908-3932.

**Research Interests**

Dr. Kuo's scientific interests include mesoscale modeling, explosive marine cyclogenesis, mesoscale convective systems, tropical cyclones, heavy rainfall prediction, data assimilation, GPS atmospheric remote sensing, and model initialization.

**Graduate and Postdoctoral Advisors**

Richard A. Anthes, Ph.D. Advisor, Pennsylvania State University; President Emeritus, UCAR

Harold D. Orville, M.S. Advisor, South Dakota School of Mines and Technology

**Thesis Advisor and Postgraduate-Scholar Mentor**

Georg Grell (University of Miami, 1988); Warren Blier (University of Washington, 1990); Jeffrey Tilley (Penn State University, 1990); Wei Wang (Penn State University, 1992); Mark Stoelinga (University of Washington, 1993); James Bresch (Colorado State University, 1994); Wei-Kuo Soong (National Taiwan University, 1994); Xin-An Chen (University of Hawaii, 1994); Jordan Powers (University of Washington, 1994); Young Zheng (University of Oklahoma, 1994); Fang-Ching Chien (University of Washington, 1996); Shinn-Der Shyu (St. Louis University, 2000); So-Young Ha (Seoul National University, 2002); Mark Wang (National Taiwan University, 2012); Shu-Ya Chen (National Central University, 2008); Zaizhong Ma (Institute of Atmospheric Physics, 2008); Lung-Yao Chang (National Taiwan University, 2013); Na Liu (Ocean University of China, 2010); Xingqin Fang (Sun Yet-Sen University, 2011); Matthias Trattler (University of Graz, 2013); Chuan-Chi Tu (University of Hawaii, 2014); Therese Rieckh (University of Graz, 2015)

**Graduate Students Advised: 25**

**Postdoctoral Scholars Mentored: 15**