Infos zu Bringi, V. N.; Mishra, K. V.; Thurai, M. [Eds.]: Advances in weather radar. Vol. 2: Precipitation, science, scattering ...

Inhaltsangabe:

This comprehensive handbook written by a team of international experts discusses the key technical and scientific ideas that have propelled the field of weather radar forward. The book covers the five areas of weather radars: science, engineering, signal processing, electromagnetics, and applications.

Inhaltsverzeichnis:

Chapter 1: Phased array weather radar developed in Japan

Chapter 2: Weather radar data calibration and monitoring

Chapter 3: Scattering by snow particles

Chapter 4: Radar and hail: advances in scattering, detection, and sizing

Chapter 5: Understanding the role of rain drop shapes and fall velocities in rainfall estimation from polarimetric weather radars

Chapter 6: The raindrop size distribution - the unknown that holds everything together

Chapter 7: Fusion of radar polarimetry and atmospheric modeling

Chapter 8: End-to-end simulations of dual-polarization tornado debris signatures

Chapter 9: Satellite combined radar-radiometer algorithms

Chapter 10: Weather radar measurements in Antarctica

Chapter 11: Radar advances related to severe weather

Chapter 12: Deep-learning-aided rainfall estimation from communications satellite links

Herausgeber:

Bringi, V.N.; Mishra, Kumar Vijay; Thurai, Merhala

V.N. Bringi is an emeritus professor at Colorado State University, USA. He received his PhD from The Ohio State University, then joined the faculty at Colorado University where he spent his entire career. He is a fellow of the American Meteorological Society (AMS) and recipient of the AMS Remote Sensing Prize in 2013.

Kumar Vijay Mishra is a senior fellow at the United States DEVCOM Army Research Laboratory. He received his PhD in electrical engineering and MS in mathematics from The University of Iowa, Iowa City. He is the recipient of many best paper awards and fellowships including the IET Premium Award for Best Paper (2021), US National Academies ARL Harry Diamond Distinguished Fellowship (2018), and Andrew and Erna Finci Viterbi Postdoctoral Fellowship (2015-2017).

Merhala Thurai is a research scientist at Colorado State University, USA. She received her BSc in Physics from Imperial College, London, and her PhD from King's College, London. She worked at Rutherford Appleton Laboratory, Oxon, UK, for 14 years, and has been with Colorado State University since 2004.