



REMOTE SENSING IN THE ERA OF CLIMATE CHANGE



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Accurate measurement of rainfall is one of the most important and challenging problems that has been pursued for thousands of years by various civilizations. Most of the modern societies spend a lot of resources to monitor rainfall and its variability, because rainfall is the major source of freshwater. The potential for climate change and rapid urbanization has made this even more critical. Remote sensing radars have been utilized to provide a good measure of the spatial variability of rainfall patterns, nevertheless getting accurate quantitative estimate has always been a challenge. More recently major advance has been made in the area of rainfall measurement using dual-polarization radar technology.

This lecture will present the journey from observing raindrop shapes to regional and global measurement of rainfall to monitoring the global water cycle, with a brief introduction to the NASA Global Precipitation Mission as well as the emerging urban flood monitoring radar networks that is becoming a key part of smart city infrastructure in major metropolitan regions.

ABOUT THE SPEAKER

Prof V. Chandrasekar currently serves as the University Distinguished professor at Colorado State University, with Honorary Distinguished Chair professor Titles in many universities, including University of Helsinki, IISc Bangalore, and IIT Kharagpur. He got his B Tech from IIT Kharagpur and PhD from Colorado State University. He is an author of two text books, five general purpose books. He is elected Fellow of both Science and Engineering societies including IEEE, American Meteorological Society, Union of Radio Science (URSI), and NOAA-CIRA. He also has been given numerous awards including IEEE education award, NASA Technical Achievement award as well as, University Outstanding Researcher award and Outstanding Advisor Award. He was knighted by the Government of Finland for discoveries leading to remote monitoring of the fragile Arctic systems. He has served as advisor to about 40 PhD students and about 45 MS students.