2019 Luke Howard Award

We are delighted to announce Janet Barlow, Professor of Environmental Physics at the University of Reading, as the winner of the 2019 Luke Howard Award for Outstanding Contributions to the Field of Urban Climatology.

Through her deep theoretical understanding, Janet has made major contributions to urban meteorology over the last twenty years. She has undertaken innovative research that is of extremely high quality, and authored many ground-breaking and influential publications addressing a broad range of topics. She has inspired and mentored many students and young scientists and is an enthusiastic and engaged member of the international urban climate community.

A physicist by training, Janet's early work concerned fundamental studies of turbulence and pollutant dispersion in the highly complex roughness sublayer – i.e. within street canyons and around buildings. Through innovative field observations, sophisticated laboratory studies and numerical models, her work has substantially advanced our understanding of turbulent exchange and its relation to air quality. She has devised and led major field campaigns, for example the DAPPLE and ACTUAL projects, and has pioneered new techniques to improve analysis and interpretation of LiDAR and wind tunnel data. Her research areas have grown to include the whole of the urban boundary layer where novel application of remote sensing instruments combined with eddy covariance instrumentation has enabled investigation of the vertical structure of the urban boundary layer and led to new insights into phenomena such as the stable nocturnal boundary layer over central London. Recently, Janet's work has expanded in breadth to include topics such as wind engineering, building ventilation and indoor climate, among others. She is internationally recognised for her extremely impressive range and depth of expertise.

Besides her impressive academic record, collaborations developed with energy scientists, engineers and policymakers have ensured that her research is put to practical use. She has served on the IAUC Board and the AMS Board for the Urban Environment as well as several advisory committees. She is supportive of young scientists and actively promotes equality and diversity. Her strong mentoring record demonstrates her substantial contributions to urban climate through teaching and training and her rich experience has been passed on through her many national and international invited presentations. Janet is an excellent role model for many students and scientists and thoroughly deserves the recognition of the 2019 Luke Howard Award.