GERALD MILLS

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I am a physical geographer working in the School of Geography at UCD (Ireland). I completed my education at UCD (Ireland) and at The Ohio State University (US), where I received my PhD in 1989. At OSU I specialised in climatology and geographic information systems (GIS). I subsequently worked in the US before returning to UCD in 1997 where I am currently employed as a Professor in the School of Geography, UCD.

My research focus is climatology, and my special interest is in the climates of cities. I have considerable experience in modelling and measuring urban microclimates using simple and sophisticated techniques. My interests in this area have deepened over time and I have become interested in how urban climate knowledge is transferred into planning and design practice at different scales. This research has grown to include work with social scientists on urban greening and co-creation of urban green plans. I have worked with the International Association for Urban Climates (IAUC) since its formation in 2000. I have edited its Newsletter (Urban News), acted as President and as Treasurer and organised the 8th International Conference on Urban Climates in Dublin in 2012. I have worked for many years with the World Meteorological Organization on urban issues, including running a training course and most recently on developing Integrated Urban Services.

Since 2012 much of my research work has been linked to the World Urban Database and Portal Tools (WUDAPT) project. WUDAPT has been designed to gather data on cities world-wide that is suited to urban climate studies including, comparisons among cities, managing urban observations and running atmospheric modelling. This project reached a major milestone with the publication of the global map of Local Climate Zones, which provides a basic physical geography of cities that can be used to support urban-scale modelling. I am using these data alongside other global datasets to explore global urban climatology. I work with colleagues in the Urban Climate Change Research Network (Europe) on the application of climate science to urban planning and design and with Julie Futcher (Urban Futures) on climate education and urban microclimates. I am working with Dublin authorities on plans for a climate resilient city within the context of zero-Carbon Dublin.

I received the IAUC's **Luke Howard Award** in 2021 for lifetime contribution to the development of urban climatology. I am a Review Editor of the IPCC's Special Report on Cities and Climate Change.

Education:

- 1977-1980 BA, UCD, DUBLIN (IRELAND)
- 1981-1983 MA UCD, DUBLIN (IRELAND)
- 1984-1989 PHD THE OHIO STATE UNIVERSITY (USA)

Academic Career:

- 1989-1990 ASSISTANT PROFESSOR, BOWLING GREEN STATE UNIVERISTY (USA)
- 1990-1997 LECTURER, UNIVERSITY OF CALIFORNIA AT LOS ANGELES (US)
- 1997- current PROFESSOR, UCD, DUBLIN
- 2022- current ADJUNCT PROFESSOR, UNIVERSITY OF SÃO PAULO, BRAZIL

SELECTED PUBLICATIONS

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Futcher J., Mills G. and Emmanuel R. 2018. Interdependent energy relationships between buildings at the street scale. **Building Research & Information** 46(8), 829-844.
Oke T., Mills G., Christen A. and Voogt J. 2017 Urban Climates. Cambridge University Press.
Futcher, J., Mills, G., Emmanuel, R. and Korolija, I., 2017. Creating sustainable cities one building at a time: Towards an integrated urban design framework. **Cities**, 66, pp.63-71.
Alexander P., Mills G. and Fealy R. (2015) Using LCZ data to run an Urban Energy Balance Model, **Urban Climate** 13 :14-37