SEMINAR

“Modelling changes to extreme rainfall”

held by Prof. Conrad Wasko – Univ. of Sydney, Australia

April 24th, 2025
9:30am – 10:30am

TESAF DEPARTMENT, UNIPD – 3° Floor, Sala Consigliare
Viale dell’Università, 16 Legnaro (PD)

Prof. Conrad Wasko
Dr Conrad Wasko is a civil engineer with expertise in environmental hydrology. He holds a prestigious Sydney Horizon Fellowship around future proofing Australia from increasing flood risk.

The question posed in this presentation is: what is the best way to statistically model the impact of climate change on extreme rainfall? The answer is unlikely to be one size fits all, but by using a large sample of sub-hourly rainfall across the continent of Australia we can make inroads to answering this question.

Extreme sub-hourly rainfall in Australia shows strong changes, well captured by GEV models using global temperature. Longer-duration rainfall shows weaker observed trends but stronger signals in regional models. This highlights the need for multiple evidence sources. For rare extremes, the 4-parameter Kappa distribution may be more suitable than GEV. This is especially relevant in arid regions like Australia.

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