PHD SCHOLARSHIP

The University of Queensland (Australia) and the University of Exeter (UK) are offering a PhD scholarship for a motivated student to contribute to research being undertaken collaboratively between the Wind Research Laboratory (UQ), the Atmospheric Observations Research Group (UQ) and the Exeter Climate Systems group. The project is funded through the recently launched QUEX Institute and successful completion of doctoral studies by the successful candidate will result in degrees bestowed by both the University of Queensland and the University of Exeter. The fully-funded scholarships include a generous living allowance stipend, tuition fee waiver, travel and training funds and Overseas Student Health Cover (where applicable). The scholarship is open to domestic (Australian) and international applicants.

PROJECT INFORMATION

Understanding the changing risk of severe thunderstorms by novel stochastic modelling of extreme hail and wind hazards

Severe thunderstorms are responsible for billions of dollars in damage to buildings, critical infrastructure and agricultural crops every year. Despite the clear and repeated impact of these events, limited tools exist for those exposed to this hazard (e.g., infrastructure operators, farmers) to sustainably manage or mitigate their risk. A lack of understanding about how severe thunderstorm activity will be influenced by climate change makes the sustainable management of this future risk even more complicated.

The aim of this project is to improve how severe thunderstorm risk is managed and mitigated. This will be achieved through the development of a stochastic, event-based thunderstorm hazard model that can be used to develop a severe thunderstorm climatology in the current climate and also determine how this climate will change into the future. This research will improve our understanding of severe thunderstorm activity and its drivers. It will also provide a decision support tool for policy makers, disaster managers and re/insurers. The model will be developed and validated using analysis of surface weather, radar, satellite and global reanalysis databases.

QUALIFICATIONS

Candidates must hold a relevant undergraduate or Master's degree in engineering, science or mathematics with interest and experience in atmospheric or climate sciences, applied statistics or any engineering discipline relating to modelling the atmosphere. Students with experience in statistical modelling of the severe weather or experience analysing large databases of weather observations are strongly encouraged to apply.

HOW TO APPLY

Interested candidates should contact Dr Matthew Mason (matthew.mason@uq.edu.au) to discuss their interest in the project. Further information on the application process and requirements can be found here, with further detail on the project here. Applications are due by **15 June, 2020**.