



DEPARTMENT OF CIVIL ENGINEERING

Civil Engineering Grand Challenges Lecture

The global 'wildfire crisis' and its mitigation: unravelling myths from realities

Professor Stefan Doerr

Centre for Wildfire Research, Swansea University, UK

Date: June 12th, 2025 (Thursday) Time: 5:00 p.m. to 6:15 p.m.
Venue: Online (<https://hku.zoom.us/j/92886916777?pwd=MCva1UlsaX93yrJGvB6SwVcsb9gpyH.1>)
Meeting ID: 928 8691 6777; Password: 741821



Abstract

Globally wildfires burn an area equivalent the size of Europe each year, emit as much carbon as a fifth of the global emissions from fossil fuels, and are economically more costly per person affected than storms, floods or earthquakes. In recent years extreme fires in Australia, Canada, Chile, Greece or the USA have led to unprecedented areas burned, carbon emissions, death tolls, or economic losses, with fires also emerging in previously unaffected regions. Yet globally, the total area burned is declining.

Changes in climate, land use, population density, as well as advances in fire detection, firefighting and materials technology have led to changes in the distribution and impacts of fire. This lecture will provide an overview of wildfires and their impacts globally with the aim to unravel myths that often arise from media misrepresentation from realities on the ground. Particular foci are (i) the role of climate and land management changes in wildfire trends, (ii) the catastrophic Los Angeles fires of January 2025, as well as (iii) advances in modelling and other technological developments that aid the prediction and mitigation of wildfires.

About the Speaker

Stefan Doerr is *Professor of Wildland Fire Science at Swansea University (UK)*, Director of its *Centre for Wildfire Research* and Editor-in-Chief of the *International Journal of Wildland Fire*. He has investigated wildfires over three decades across all fire-affected continents and has held collaborative research positions in Australia, Spain, and the USA. His work focuses on wildfire impacts and their mitigation, as well as global fire patterns, the role of climate change, trends and social perceptions of fire. He is a member of *OECD's Task Force on Climate Change Adaptation* and works closely with academics, natural resources managers, firefighters and industry partners in the UK and overseas. He frequently engages with TV, printed and online news both in the UK and internationally, and acts as a fact checker for *Climatefeedback.org*, a global coalition of scientists working to improve the accuracy of climate media coverage. The *Royal Geographical Society* presented him with the 2024 Murchison Award, the most senior of its awards, for his pioneering research, influencing policy, and management of environmental risks from wildfires.