Wildfire Evacuation Investigations from Questionnaire Data to GPS Data

Thursday, June 06, 2024, 12-1 PM PT
Location: Engineering 6 BLDG, Room 580B
Zoom: https://ucla.zoom.us/j/94778587870

Abstract

Wildfires are a major threat to communities living in wildland-urban interface and rural areas. Evacuation is one of the main strategies to mitigate the impact of these disasters on human lives. This presentation provides insights from the latest investigation carried out by the two presenters using both questionnaire data and GPS data. This presentation shows the pros and cons of these two types of data focusing on the findings from several wildfires in the USA: the 2016 Chimney Tops 2 Fire, the 2019 Kincade Fire, and the 2021 Marshall Fire.

Ruggiero Lovreglio, PhD

Dr. Ruggiero Lovreglio (known as Rino) is an Associate Professor at the School of Built Environment at Massey University (New Zealand). He is also a Rutherford Discovery Fellow for Royal Society of New Zealand. Dr. Rino's research focuses on evacuation dynamics in building disasters and large-scale disasters such as building fires, earthquakes, wildfires and floods. His research also focuses on the use of XR technologies to enhance safety training. Dr Rino was awarded the Massey Research Medal (Early Career) in 2020 and the 5 under 35 award by the Society of Fire Protection Engineers. He is currently Associate Editor for Safety Science (Elsevier), Fire Technology (Springer), Frontiers in Computer Science, and Frontiers in Psychology. He is part of the Editorial Board of Fire Safety Journal (Elsevier) and an ISO committee member representing New Zealand in the development of new fire engineering standards.

Xilei Zhao, PhD

Dr. Xilei Zhao is the Director of Smart, Equitable, Resilient Mobility Systems (SERMOS) Lab and Assistant Professor of Transportation Engineering at the University of Florida. Dr. Zhao received a Master's degree in Applied Mathematics and Statistics and a Ph.D. degree in Civil Engineering from the Johns Hopkins University. She specializes in leveraging AI and data science to model human behavior in disasters such as wildfires and hurricanes. Her research has been recognized by multiple awards, e.g., the 2024 NSF CAREER Award, the National Academies' Early-Career Research Fellowship, and the 2020 Travel Behaviour and Society Outstanding Paper Award. Dr. Zhao is currently co-leading the USDOT Tier 1 University Transportation Center for Equitable Transit-Oriented Communities (CETOC) and serving on the editorial board of Data Science for Transportation.