DAVID LALLEMANT
Assistant Professor, Nanyang Technological University and Co-founder, Stanford Urban Resilience Initiative, United States

David Lallemant's research focuses on understanding and quantifying the evolution of extreme risk in today's growing cities. He uses hazard modeling, engineering analysis, predictive modeling and spatial statistics for application in large-scale natural disaster risk analysis. The transdisciplinary and policy-oriented nature of his work has led him to build collaborations with the World Bank, Google, the Red Cross, the Global Facility for Disaster Reduction and Recovery, the Natural Capitals Project and others. He holds a PhD from Stanford University, a master's degree from UC Berkeley (2010) and bachelor's degree from MIT (2007). David co-founded the Stanford Urban Resilience Initiative and the Co-Risk Labs consultancy group.

David is also active in post-disaster response and recovery, which forms the basis for his research on post-disaster assessment and community resilience. He worked for two years in Haiti following the 2010 earthquake and has been involved with the response and recovery following the Christchurch earthquake and recent earthquake in Nepal.

Disrupting disaster - Choosing the risk trajectory of our cities

"If you do not change direction, you may end up where you are heading" (proverb by Lao Tzu, Chinese philosopher of the 6th-5th century BC).

Key to making informed policy decisions to promote resilient and sustainable future cities is the ability to predict their risk as it relates to dynamic changes in our natural and urban environments: changes in our hazard landscape, increases in population, specific urban growth patterns, evolving vulnerability and other time-dependent processes. Understanding and modeling these processes enables us to shed light on the likely risk trajectories of our cities. For many cities this analysis is disheartening, as it predicts increases in disaster risk even more rapid than increases in population. But trajectory is not destiny. Modeling future risk provides alarming visions of plausible dystopian futures, but also enables us to change course towards trajectories of increased resilience.