



Nathaniel Heatwole

PSAM12 Speaker Bio

Cost-Effectiveness of Vehicle Barriers and Setback Distance for Protecting Buildings from Vehicle Bomb Attack

Short Statement: Sole author.

BIOGRAPHY

Nathaniel Heatwole is a Post-Doctoral Research Associate at the Center for Risk and Economic Analysis of Terrorism Events (CREATE), which is based at the University of Southern California in Los Angeles, USA. CREATE is one of several university Centers of Excellence established by the U.S. Department of Homeland Security (DHS). His research involves a combination of risk analysis and risk management, operations research and mathematical and statistical modeling, and economics and policy. His research interests include risk and consequence modeling of terrorism and natural hazard events, cost-effectiveness modeling for safety systems and of mitigation measures, and homeland security and infrastructure protection.



Prior to joining CREATE, he was a Ph.D. student in the Department of Engineering and Public Policy (EPP) at Carnegie Mellon University in Pittsburgh, PA. EPP is a unique interdisciplinary department within the College of Engineering where research addresses issues at the intersection of science, engineering, technology, policy, economics, government, and society. His dissertation topic examined the cost-effectiveness of protecting buildings from vehicle bomb attacks, and the possible pros and cons of more risk- and performance-based U.S. government building codes for blast.

While at CREATE, in addition to refining and extending his dissertation research on blast protection, he has also done work on assessing the economic value (in a willingness-to-pay sense) of preventing injuries (non-fatal) in terrorist attacks, and on developing a reduced-form rapid estimation model to predict the total dollar amount of property damage in significant U.S. earthquakes. He has also worked on two projects for the U.S. Customs and Border Protection (CBP) agency, one on estimating the impact on the U.S. economy of reduced wait times at U.S. ports of entry, and another on developing a methodology to evaluate the economic impact of CBP's Centers of Excellence and Expertise (CEE) program, which is designed both to promote trade facilitation and also to increase the effectiveness of CBP's enforcement efforts at the border.