Innovations in Roadside and Motorsports Safety: Mitigating Risks and Enhancing Infrastructure

Presentation Abstract
The escalating numbers of road fatalities and injuries worldwide have reached epidemic levels, as identified by the United Nations and the World Health Organization. These incidents result not only in personal tragedy but also exert a substantial financial toll on society. Researchers at the Midwest Roadside Safety Facility (MwRSF) are dedicating significant efforts to curb these numbers by innovating and enhancing technologies for safer transportation infrastructure. This seminar will provide a broad overview of recent advancements made in roadside safety, threat mitigation, and motorsports safety research. The presentation will provide insights into the latest methodologies employed in the design, testing, and evaluation of safety features and structures, focusing on minimizing the risk associated with crashes.

About the Speakers

Dr. Tewodros Yosef earned his Ph.D. in Civil Engineering from the University of Nebraska-Lincoln in 2021. With over seven years of research experience, he has served as a Graduate Research Assistant and a Post-Doctoral Research Associate at the Midwest Roadside Safety Facility (MwRSF). Throughout his academic journey at the University of Nebraska-Lincoln, Dr. Yosef garnered multiple accolades, including the Professional Development Fellowship, the Milton Mohr Graduate Fellowship, and the Howard/Benak Engineering Award. He was recently honored with the Outstanding Postdoc Award from the university’s Office of Graduate Studies. Over the years, Dr. Yosef has specialized in developing, verifying, and validating advanced computational modeling techniques. His research focuses on assessing the resilience of critical infrastructure systems under extreme conditions such as impact, blast, and ground shock. His areas of interest extend to designing and analyzing innovative roadside safety products using non-linear finite element analysis.

Dr. Chen Fang received his Ph.D. in Civil Engineering from the University of Nebraska-Lincoln in 2020. His graduate study focused on performance evaluation and improvement for civil infrastructure under extreme conditions, including vehicle collisions, blasts, and earthquakes. He continued his research on analysis and design of roadside safety hardware for traffic safety improvement as a Post-Doctoral Research Associate at the Midwest Roadside Safety Facility, a part of the University of Nebraska-Lincoln. His main research areas includes resilience of civil infrastructure under extreme demands, transportation safety, analysis and evaluation of roadside safety hardware, design of sustainable composite structures, and threat mitigation strategies. These topics tackle engineering questions challenging researchers and engineers in civil engineering and facilitate the development of structural systems in a sustainable and resilient manner.

Join us in person:
Friday, September 8, 2023
11:00 - 11:50 AM Central Time
Nebraska Hall (NH) Room 404 (in person), Lincoln
Peter Kiewit Institute (PKI) Room 160 (remote), Omaha

The University of Nebraska does not discriminate based on race, color, ethnicity, national origin, sex, pregnancy, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, marital status, and/or political affiliation in its programs, activities, or employment.