Xin Ye

Ph.D.

Senior Biomechanist

Department
Accident Reconstruction & Forensic Animation

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Locations
Los Angeles, CA

Biography

Dr. Ye received his Ph.D. in Biomedical Engineering at Wake Forest University after earning his M.S. in Mechanical Engineering at the University of Virginia. As a biomechanical engineer, his primary areas of expertise include injury biomechanics, accident reconstruction, and sports injury evaluation.

Dr. Ye's previous academic experience includes computational modeling and accident reconstruction using human body models, as well as analysis of lumbar spine and lower extremity injuries sustained in motor vehicle crashes. He has also been involved in developing a football helmet model for head concussion research, sponsored by the NFL. Additionally, his past academic research includes the investigation of knee airbag effectiveness on lower extremity injuries using a combination of sled testing, computational modeling, and field data analysis. He has published peer-reviewed journal papers and presented at numerous national/international conferences.

Dr. Ye has been working as an engineering consultant since 2019. He has extensive experience using biomechanical analysis to elucidate the injury mechanism and consistency. He has testified as an expert witness in numerous depositions and trials.

Credentials

- Ph.D. | Doctor of Philosophy - Biomedical Engineering

Representative Consulting Assignments

- Accident Reconstruction | Analyze and opine on the dynamics of various types of incidents, including motor vehicle accidents, slip and falls, trip and falls.
- Biomechanical Analysis | Determine injury causation, mechanism and consistency of an incident.

Professional Experience

- 2024 - Current | Senior Biomechanist | YA Engineering Services
- 2019 - 2024 | Senior Consultant | Rimkus

Area of Practice

- Accident Reconstruction
- Biomechanics

Publications and Presentations

- Ye, X., et al. (2020). Lumbar spine response of computational finite element models in multidirectional spaceflight landing conditions. Journal of Biomechanical Engineering, 142(5).
- Decker, W., Baker, A., Ye, X., et al. (2020). Development and multi-scale

validation of a finite element football helmet model. Annals of Biomedical Engineering, 48(1), pp.258-270.

- Weaver, A.A., Costa, C., Ambrosini, A., Tan, J., Maez, L., Ye, X., et al., (2019). Sarcopenia and osteosarcopenia in seriously injured motor vehicle crash occupants. Traffic Injury Prevention, 20(sup2), pp. S195-S197.
- Ye, X., et al. (2018). Numerical investigation of driver lower extremity injuries in finite element frontal crash reconstruction. Traffic Injury Prevention, 19(sup1), S21-S28.
- Ye, X., et al. (2018). Computational modeling and analysis of thoracolumbar spine fractures in frontal crash reconstruction. Traffic Injury Prevention, S1-S8.
- Gaewsky, J., Jones, D., Ye, X., et al. (2018). Modeling human volunteers in multidirectional, uniaxial sled tests using a finite element human body model. Annals of Biomedical Engineering, 1-25.
- Nie, B., Sathyanarayan D., Ye, X., et al. (2018). Active muscle response contributes to increased injury risk of lower extremity in occupant-knee airbag interaction. Traffic Injury Prevention, 19(sup1), S76-S82.
- Kim, T., Funk, J. R., Bollapragada, V., Ye, X., Crandall, J. (2017). Evaluation of biofidelity and repeatability of THOR-Lx metric under axial impact loading. International Journal of Precision Engineering and Manufacturing, 18(7), 1027-1034.
- Ye, X., et al. (2015). Case series analysis of hindfoot injuries sustained by drivers in frontal motor vehicle crashes. Forensic Science International, 254, 18-25.
- Ye, X., et al. (2015). Analysis of crash parameters and driver characteristics associated with lower limb injury. Accident Analysis & Prevention, 83, 37-46.

Education

- Wake Forest University - Doctor of Philosophy - Biomedical Engineering - Winston-Salem - North Carolina
- University of Virginia - Master of Science - Mechanical Engineering - Charlottesville - Virginia
- Jiangsu University - Bachelor or Science - Mechanical Engineering - Jiangsu - China

Training Courses

- Traffic Crash Investigation 1 - Northwestern University - Center for Public Safety - 2019
- Traffic Crash Investigation 2 - Northwestern University - Center for Public Safety - 2019

Affiliations

- Society of Automotive Engineers (SAE)
- Biomedical Engineering Society (BMES)
- The Association for the Advancement of Automotive Medicine (AAAM)