DESIGN RESEARCH ENGINEERING
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Juff George, M.S., P.E.
Senior Project Engineer

Professional Specialization

With over 15 years of experience in biomechanics and human injury analysis, Mr. George specializes in evaluating the biomechanics of injuries across a wide range of scenarios, including slip, trip, and fall events, elevator and escalator incidents, interactions involving consumer products, occupational and industrial accidents (falling objects, falls from heights) and all modes of automotive collisions.

He has extensive research experience in the human gait to analyze individuals negotiating diverse environments including stairways, curbs, and level ground, with a particular emphasis on the role of footwear. As a certified English XL Tribometrist, he has assessed the slip resistance of numerous walkway surfaces and its role on overground walking. He has also evaluated claims of injury during elevator and escalator stop events using inertial measurement units (IMUs) to collect precise data of the motion of occupants, elevators, and escalators to aid in his analyses.

He has conducted safety evaluations for a wide variety of consumer products, including juvenile products, virtual reality products, playground equipment, sports equipment, and household appliances—examining potential hazards associated with the use and misuse of these products. He has identified potential hazards and emerging hazard patterns using large-scale incident and injury databases, such as the Consumer Product Safety Commission's (CPSC) National Electronic Injury Surveillance System (NEISS). He has performed accident injury risk analyses related to multiple body regions, with extensive expertise in evaluating injury mechanisms and kinematics of children interacting with juvenile products. He also provides expertise on issues related to CPSC inquiries and product recalls.

Education & Professional Honors

Bachelor of Science, Biomedical Engineering, Drexel University, 2010
Master of Science, Biomedical Engineering, Drexel University, 2010
Engineering Management Certificate, Drexel University, 2010
Tau Beta Pi Honor Society
Kappa Theta Epsilon Honor Society

Licenses and Certifications

Professional Engineer, State of New York #101784
Professional Engineer Mechanical, State of North Carolina #056784
Professional Engineer, Commonwealth of Pennsylvania #PE088877
Certified English XL Tribometrist (CXLT)
Certified Playground Safety Inspector (CPSI)

Professional Experience

Design Research Engineering, Senior Project Engineer, September 2025 – present
Exponent, Inc., Managing Engineer - Biomechanics, August 2010 – September 2025

Professional Affiliations

Member - ASTM International, F13 Pedestrian/Walkway Safety and Footwear
Member - ASTM International, F15 Consumer Products
Member - American Society of Biomechanics

Juff George, P.E.

Publications and Presentations

Guttag, M, Kennedy, E, George, J, & Pasquesi, S. "Evaluation of head Injury patterns and risk mitigation strategies associated with falls from playground equipment." Proceedings of the ASME 2022 International Mechanical Engineering Congress and Exposition. Volume 9: Mechanics of Solids, Structures, and Fluids; Micro- and Nano-Systems Engineering and Packaging; Safety Engineering, Risk, and Reliability Analysis; Research Posters. Columbus, Ohio, USA. October 30–November 3, 2022.

Isaacs JL, George J, Campolettano E, Cutcliffe H, Miller B. "The role of three-point restraints for occupants in moderate severity frontal collisions." SAE Technical Paper 2022-01-0845.

Rapp van Roden E., George J., Milan L., Bove R. “Evaluation of injury patterns and accident modality in step ladder-related injuries.” Applied Ergonomics 96, 2021.

George J., Davis M., Sharpe S., Olberding J., Imler S., Bove R. “Evaluation of occupant kinematics during low-to moderate-speed side impacts.” SAE Technical Paper 2020-01-1222.

Bruno A., Toney-Bolger M., George J., Koller J., Filatov A., Olberding J. “Evaluation of occupant kinematics in low- to moderate-speed frontal and rear-end motor vehicle collisions.” SAE Technical Paper 2019-01-1226.

George J., Heller M.F., Kuzel M.J. “Effect of shoe type on descending a curb.” Work 2012; 41:3333-3338.

Heller M.F., George J., Kuzel M.J., Kwasniak A.M. “Effect of ascending and descending a curb on normal gait: A review of the literature.” Proceedings, International Conference on Slips, Trips, and Falls 2011, Buxton, United Kingdom, 2011.

George J., Heller M.F., Fritton K.E., Kuzel M.J. “Effect of shoe type on level-ground walking in women.” Proceedings, International Conference on Slips, Trips, and Falls 2011, Buxton, United Kingdom, 2011.

Heller M.F., George J., Yamaguchi G.T., McGowan J.C., Prange M.T. “Linear head accelerations resulting from short falls onto the occiput in children.” Annual Meeting of the American Society of Biomechanics, University Park, PA, 2009.