

Enhancing Safety through Social Sciences: Insights for Industry
Presented by: Board on Human-Systems Integration (BOHSI)



AMERICAN PSYCHOLOGICAL ASSOCIATION



Join us for a webinar that delves into the crucial aspects of safety culture and risk abatement across high-risk industries including: healthcare, oil and gas, and transportation. We will explore how safety can be advanced through social and behavioral sciences, and what frameworks are needed to analyze the effects of workplace conditions on safety behaviors. Key topics include overcoming barriers in dynamic environments, enhancing research on process safety management and risk, and defining the role of leadership in safety compliance.

This event is presented by the National Academies' Board on Human-Systems Integration (BOHSI), is sponsored by American Psychological Association (APA), the Human Factors and Ergonomics Society (HFES), and the Society for Human Resource Management (SHRM).

Nancy Currie-Gregg, Ph.D. is Deputy Director and Chief Technology Officer at Texas A&M University's Bush Combat Development Complex where she is responsible for national defense research and development projects. She holds appointments in Industrial and Systems Engineering and Aerospace Engineering and is internationally recognized for her human-system integration, safety engineering, and risk management expertise. Dr. Currie-Gregg spent the vast portion of her career supporting NASA's human spaceflight programs and projects. Selected as an astronaut in 1990, she accrued 1000 hours in space as a mission specialist on four space shuttle missions. Following the Space Shuttle Columbia tragedy in 2002, she led the Safety and Mission Assurance Office, enabling the safe return to flight of the Space Shuttle. She then served for over a decade as Chief Engineer and Principal Engineer with the NASA Engineering and Safety Center, conducting interdisciplinary engineering assessments critical to NASA's human spaceflight programs. As a retired U.S. Army Colonel and Master Army Aviator, she logged over 4,000 flying hours in military aircraft. Dr. Currie-Gregg received her bachelor's degree in biological sciences from The Ohio State University, a master of science in safety engineering from the University of Southern California, and a doctorate in industrial engineering from the University of Houston.

Ayse P. Gurses, Ph.D, MS, MPH is the Director of the Center for Health Care Human Factors at the Johns Hopkins Armstrong Institute and Professor in the Johns Hopkins University Schools of Medicine, Bloomberg Public Health and Whiting Engineering. She is the author of more than 130 peer-reviewed publications. Dr. Gurses's current research efforts include, but not limited to human-centered and health-IT based clinical work system design, modeling cognitive and team work to improve diagnostic safety, reducing healthcare-associated infections, improving safety of care transitions/ handoffs, and improving patient-care professional partnerships to enhance safety across the entire care continuum. Dr. Gurses has conducted research across the entire care continuum, including pre-hospital care, inpatient care, ambulatory care, long-term care, and home care, as well as transitions of care between these settings. She has been a principal/ co-principal investigator on numerous research grants and contracts- funded by the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC),

National Institutes of Health (NIH), National Science Foundation (NSF), other multiple foundations and private institutions. Dr. Gurses received multiple awards for her contributions to the science of safety, including the Federation of Associations in Behavioral and Brain Sciences Foundation Award, Liberty Mutual Award on Safety, the International Ergonomics Association Best Paper Award in Occupational Safety and Ergonomics, and the Robert R. Hoffman Award for Best Contributions to Naturalistic Decision Making Methodology.

Andrew Imada, Ph.D. is a macroergonomics consultant specializing in human and organizational change. He works with people and organizations to change their cultures, respond to scalability demands, implement disruptive technologies and survive generational transitions. He helps them meet these challenges by balancing organizational, safety, quality, and human needs. Dr. Imada has provided consulting services to a wide range of clients including: AT&T, Aramark, British Columbia Telephone, Chevron Products Company, Chevron Production Company, Hamersley Iron, Iron Mountain, Los Angeles Dodgers, NASA, PG&E, Sheraton Hotels, Pacific Coast Building Products, Sierra Nevada Brewing, Southern Glazer's Wine and Spirits, U.S. Army, and Lawrence Berkeley National Laboratories. He served as Senior Scientific Advisor for the Steelcase User Center Design Group and worked on projects advising the National Research Council, International Labour Office, and the University of California. Dr. Imada previously served on the National Academies of Sciences, Engineering and Medicine's Board on Human Systems Integration. He also served on the Board of Consulting Editors for the Journal of Applied Psychology and is a technical reviewer for many professional journals. He served as a director on the Board of Certification in Professional Ergonomics. He is a Fellow of the Human Factors and Ergonomics Society and the International Ergonomics Association.

Dr. S. Camille Peres received her Ph.D. in Psychology from Rice University in 2005 and prior to that received her BA and MA from the University of Houston-Clear Lake. Since then, she has been faculty at the University of Houston-Clear Lake and Texas A&M University. There, she conducted collaborative research on Human Factors and high-risk processing industries (e.g., oil and gas industry, chemical processing, and emergency response). Some recent studies focused on investigating performance implications for procedure design and use, Human Robotic Interaction in disaster environments, and the use of visualizations for electrical grid management. In January of 2024, she started a position with the Nuclear Regulatory Commission, where Human Factors specialists apply state of the art HF/E research to the design of interfaces and systems to support the safe use of radioactive materials for beneficial civilian purposes while protecting people and the environment. Dr. Peres is a Certified Human Factors Professional with over 125 journal and conference publications who regularly gives talks to industry groups regarding Human Factors and high-risk industries.