



American Institute of Aeronautics and Astronautics

St. Louis Section

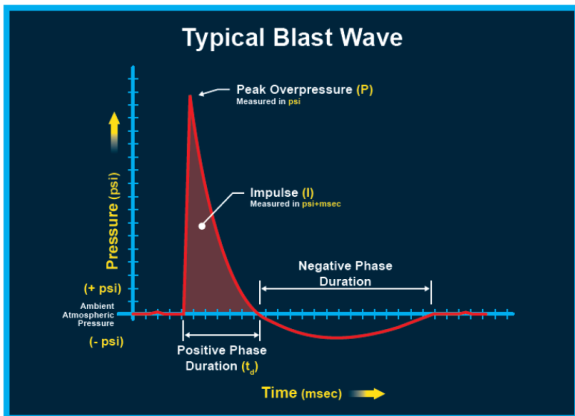
Tuesday, February 9, 2020

Virtual Zoom Meeting

Meeting login information will be distributed via email

Blast Wave-Induced Traumatic Brain Injury (bTBI): Bringing Blast Wave Knowledge Base to Neuro Trauma Research

Presented by Dr. K. M. Isaac, Professor at Missouri S&T, MAE Department



Blast wave-induced traumatic brain injury (bTBI) is a major concern for the military as highlighted by the recent missile attack in Iraq. Even though no immediate injury may be apparent, exposure to blast waves is known to cause health problems such as head ache, balance dysfunction, hearing loss, memory loss, and other neurological disorders. A RAND Corporation report estimates that approximately 20% of US forces deployed in Iraq and Afghanistan were potentially harmed by TBI.

Understanding the interaction of the blast wave as it transmits through the skull and the brain would be of great help to neuro trauma researchers. The talk will highlight blast wave modeling, associated fluid-structure interaction, and planned experiments in the Missouri S&T shock tunnel.

K. M. Isaac teaches aerospace engineering at Missouri S&T. His research is in the area of aerodynamics and fluid dynamics, and his past research topics include waveriders, shock-induced jet breakup, hydrogen-air flames, flapping wing aerodynamics, emission during automotive refueling, and redox MHD-based microfluidics. He is currently working toward a medium-endurance, low-altitude, solar-powered UAV. He is an associate fellow of AIAA, and serves as the faculty advisor to the AIAA student branch at Missouri S&T.

Schedule

Menu

Ticket Price

6:00 – 7:00 CT Presentation

None – all virtual
due to COVID-19

Free

7:00 – 7:30 CT Additional questions or
follow-on conversations

Please RSVP by completing our Jotform

<https://form.jotform.com/210274109391147>

Contact [John Schaefer](#) for questions

MISSOURI S&T

AIAA
SHAPING THE FUTURE OF AEROSPACE