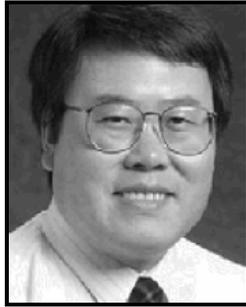


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CCT Colloquium Series

**Testing and Modeling of Impact/blast Response of Composite Armors****Guoqiang Li, Louisiana State University**

Assistant Professor, Department of Mechanical Engineering

Johnston Hall 338  
May 18, 2007 - 03:00 pm**Abstract:**

Fiber reinforced polymer composite materials have been widely used in personal armors and armored vehicles such as tanks, ships, and jet fighters due to their high strength/stiffness to weight ratio and corrosion resistance. In addition to carrying static loads and thermal loads, these structures are subjected to accidental impact loads and/or intentional blast attacks. Recently, our research group has focused on developing some energy absorbing syntactic foam materials and grid stiffened hybrid composite armors. This talk will present some of the impact test results of these novel foam materials and armors. The energy dissipation mechanisms during impact will be discussed. The coupled elastic-plastic-damage analytical framework for static, low velocity impact, and high velocity impact responses will be presented and computational challenges will be discussed.

**Speaker's Bio:**

Dr. Guoqiang Li is currently an Assistant Professor of Mechanical Engineering at both Louisiana State University and Southern University (joint faculty appointment). He received his Ph.D. degree in Civil Engineering in 1997 from Southeast University. His research interest is in manufacturing, testing, and modeling of fiber reinforced polymer composite materials and composite structures. His research has been sponsored by DoE, ARO, AFRL, NGA, USACE, USDA, FHWA, NASA-BoR, various state funding agencies and industry. His research has resulted in numerous refereed journal publications. He has received awards from ASME and other agencies for his research, mentoring, and service.