Impact loading is of critical concern to electronic equipment manufacturers. This type of loading can occur in shipping and handling as well as in normal use.

In the past decades, numerous optical methods for deformation measurements have been matured and emerged as important engineering tools. The methods provide whole-field displacement information with various sensitivities and resolutions. More recently, several methods have been applied to electronic packaging product development. The unique capabilities provided by the methods made them ideally suited for the broad range of problems encountered in electronic packaging product development.

This web seminar presents recent studies and findings conducted at CALCE related to assessment of impact loading on electronic hardware. The presentation will provide an overview of assessment techniques to assure durability under impact loading environments.

**About the Presenter**: Abhijit Dasgupta conducts his research on the mechanics of engineered, heterogeneous, active materials, with special emphasis on the micromechanics of constitutive and damage behavior. He applies his expertise to several multifunctional material systems, including electronic packaging material systems, and 'smart' composite material systems. His research contributions include solution techniques for coupled boundary value problems in multifunctional particulate and laminated composites, micromechanics approaches for constitutive properties of advanced 3-D composites, dynamic behavior and failure of thick composites, micromechanics of fatigue damage in viscoelastic eutectic-alloy composites and in shortfiber polymeric composites, and self-health monitoring in 'smart' systems. He applies these principles for developing effective virtual qualification tools, for optimizing manufacturing process windows, for real-time health monitoring and for devising quantitative accelerated testing strategies used in qualification and quality assurance of complex electronic, electromechanical and structural systems.