



# Center of Excellence for Explosives Detection, Mitigation and Response

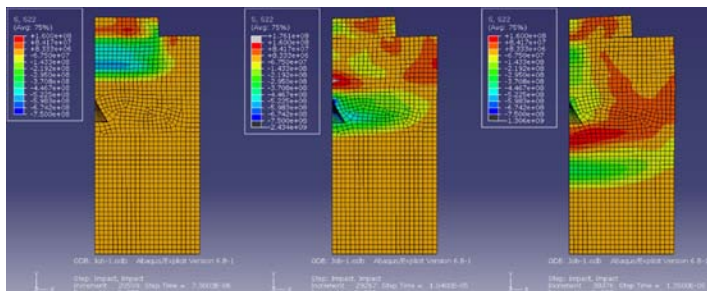
## The Research Teams

of ALERT (Awareness & Location of Explosives-related Threats) study explosives and explosions; sensors and detection scenarios, and the response of materials to blast. We have gathered an international team of researchers:

Co-leads: Northeastern U., U. Rhode Island & academic partners: Boston U., California Institute of Technology, Hebrew U. Jerusalem, Missouri U. Science & Technology, Morehouse College, New Mexico State U., Rensselaer Polytechnic Institute, Soreq Nuclear Research Center (Israel), Spelman University, Texas Tech U., U. Puerto Rico at Mayagüez, & Washington State U.

## Our Work

is critical to countering IED's. Research results and an explosives property database are available on our website . We welcome teaming with industry to solve threats to homeland security. We offer a number of short courses in explosives, both at URI and at contractor's facilities.



## Our Mission

is to protect the nation from physical and economic harm, caused by the threat, real or perceived, of attack using explosive devices. We pursue this mission using both ground-breaking research and widespread education.

## Our Goals

are to prevent catastrophic damage to society that can be caused by explosive attacks. The Center takes a three prong approach: 1) identify and neutralize the materials used to make explosives; 2) detect explosives and improvised explosive devices (IED's); 3) mitigate the blast damage to individuals and critical infrastructure.

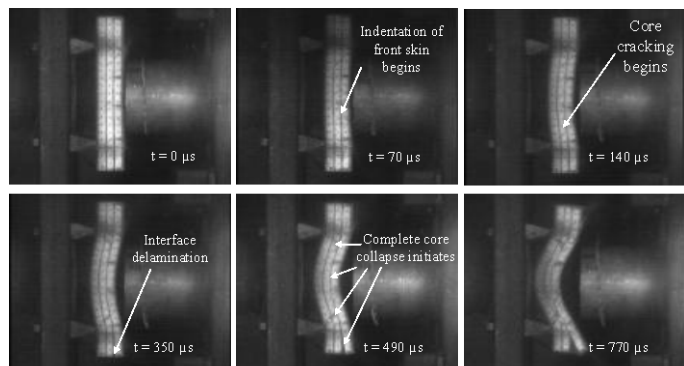
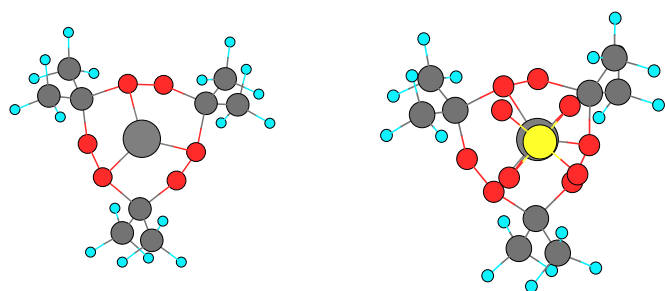
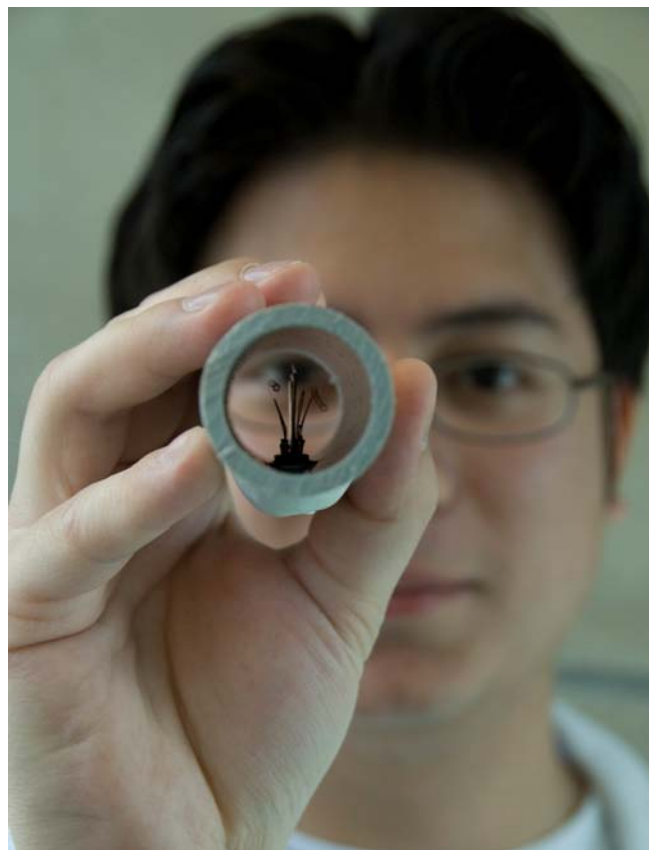
## Our Research

includes determination of explosive and precursor properties, creation of databases and libraries; development of novel sensors for trace and stand-off detections; performance testing; pre- and post-blast mitigation using various approaches, e.g. development of blast-resistant materials; modeling of failure probabilities of structural members; characterization and mitigation of blast.

## Contact Information

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Refractive Index of a Monolayer of Porous Silicon with 20% MEH-PPV Filling (Bruggeman's Effective Medium Approx.)

