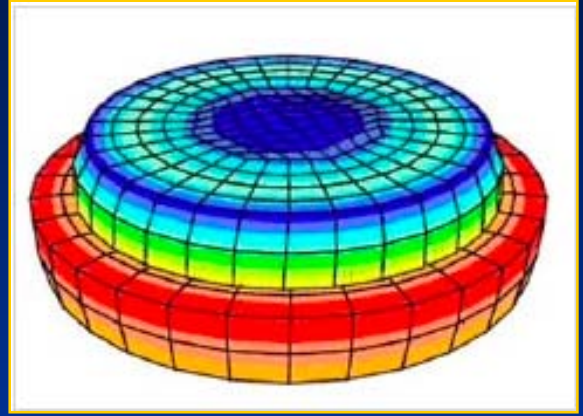


This is an interdisciplinary interest area with a special focus on the following topical areas. Explore faculty research options through the URLs provided.



- non-linear aspects of behavior of natural and engineered materials
 - Dolbow <http://www.duke.edu/~jdo/bow/>
<http://www.cee.duke.edu/news/?id=920>
 - Hueckel, Nadeau
<http://www.cee.duke.edu/faculty/nadeau/index.php>
 - Gavin <http://www.duke.edu/~hpgavin/>
 - Scruggs <http://www.cee.duke.edu/faculty/scruggs/index.php>
- computational aspects of contact mechanics
 - Laursen <http://www.duke.edu/~laursen/>
- chemo-mechanics of materials and multi-phase contact
 - Hueckel <http://www.duke.edu/~hueckel>
- loss of stability of dynamical systems and chaos
 - Virgin <http://nonlineardynamics.pratt.duke.edu/>
 - Petroski - structural failure, fracture mechanics
<http://www.cee.duke.edu/faculty/petroski/index.php>
 - Hueckel - loss of stability of non-linear behavior of materials

NONLINEAR MECHANICS AND ADAPTIVE DYNAMIC SYSTEMS

- applications of nonlinear dynamical systems theory to problems of practical engineering importance
 - Virgin <http://nonlineardynamics.pratt.duke.edu/>
- mechatronics
 - Scruggs
<http://www.cee.duke.edu/faculty/scruggs/index.php>
- structural control (Gavin, Scruggs and Virgin), and related applications of controllable materials, especially the use of electrorheological and magnetorheological dampers for structural vibration suppression (Gavin <http://www.duke.edu/~hpgavin/>)