# Fall 2019 and Winter 2020

# Organizational Meeting

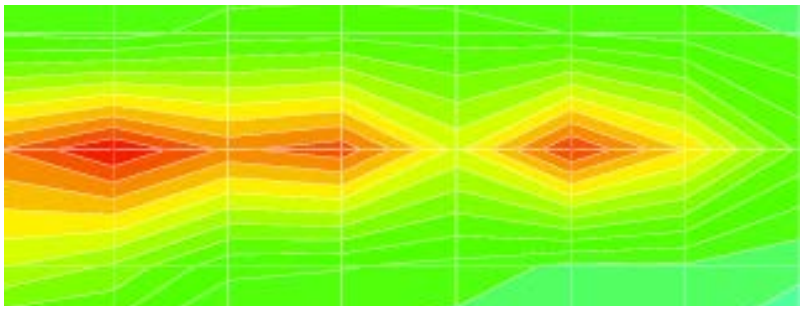
## Static and Dynamic Failure of Brittle Solids and Interfaces, from the Micro to the Mega

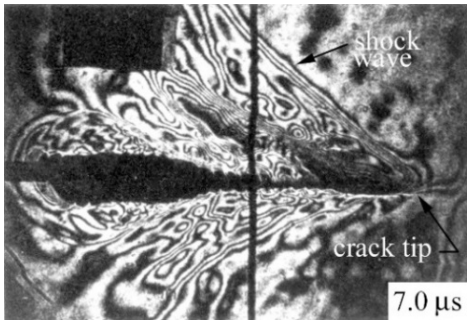
## Ae/AM/CE/ME/Ge 265 ab

**Tuesday, October 1, 2019**
**5:00pm • 115 Gates Thomas**

---

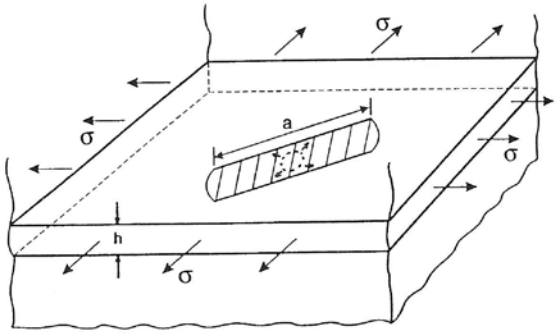
**Instructor: Ares J. Rosakis**
**TA: Kostas Karapiperis**






### Course description:

*9 units (3-0-6) first, second terms. Prerequisites: Ae/AM/CE/ME 102 abc (concurrently) or equivalent and/or instructor's permission.* Linear elastic fracture mechanics of homogeneous brittle solids (e.g. geo-materials, ceramics, metallic glasses); small scale yielding concepts; experimental methods in fracture, fracture of bi-material interfaces with applications to composites as well as bonded and layered engineering and geological structures; thin-film and micro-electronic components and systems; dynamic fracture mechanics of homogeneous engineering materials; dynamic shear dominated failure of coherent and incoherent interfaces at all length scales; dynamic rupture of frictional interfaces with application to earthquake source mechanics; allowable rupture speeds regimes and connections to earthquake seismology and the generation of Tsunamis.




For information email: arosakis@caltech.edu or kkarapip@caltech.edu