

## Experimental Solid Mechanics across Spatial and Temporal Scales

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Advances in transportation, clean energies, space exploration, and consumer electronics require continuous development of novel materials with specific functionalities. Understanding their mechanical deformation and failure across scales, from atomistic to continuum, motivates our community to advance innovations in experimentation and analysis. In this talk, I will discuss selected topics in experimental solid mechanics to illustrate progress in these areas with an emphasis on understanding the role of material architecture and chemical/atomic composition on constitutive response. In particular, I will present three case studies: i) Inelastic wave propagation in ceramics, ii) Deformation and fracture of biomaterials, iii) Nanomechanics of low dimensional materials.

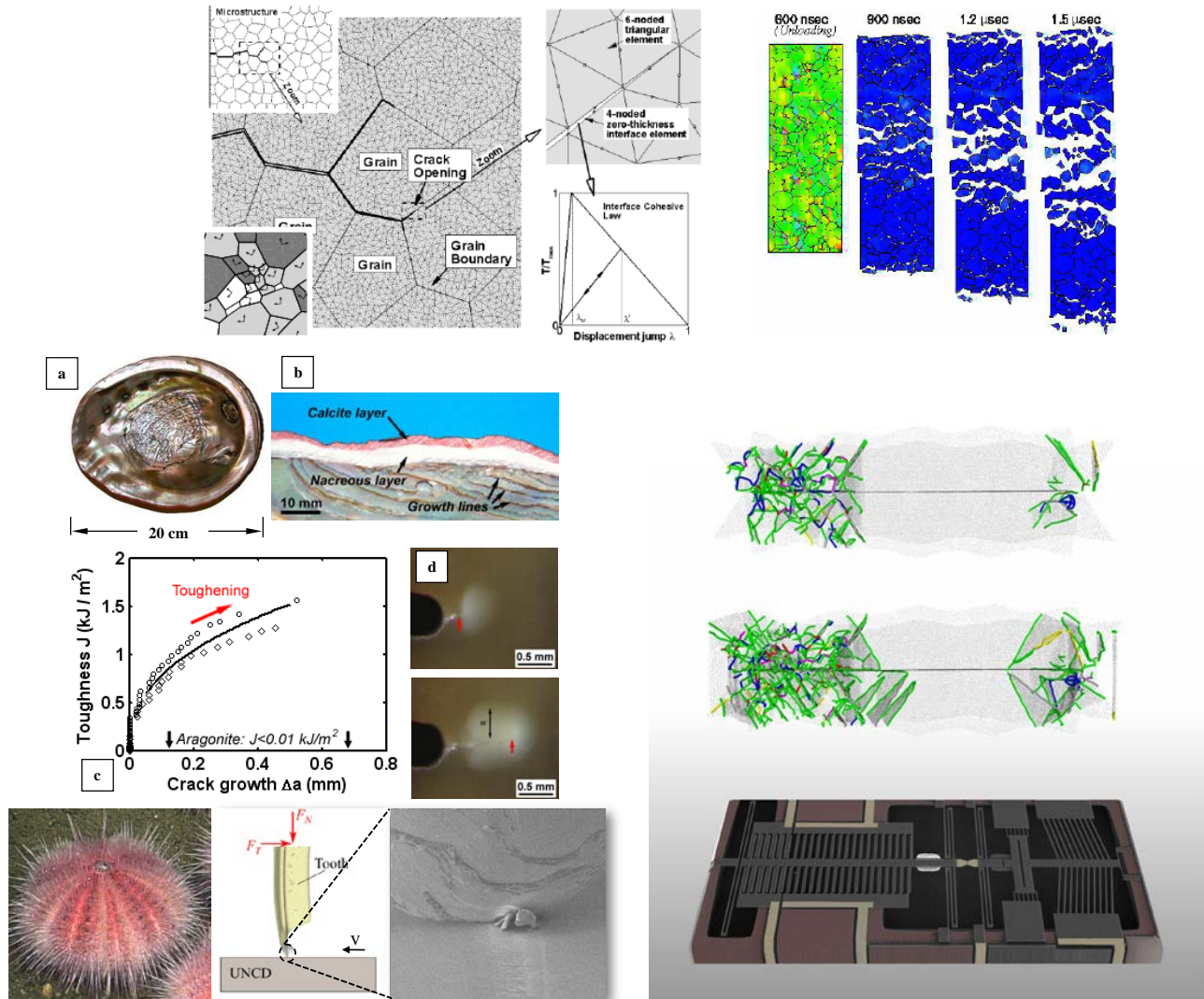


Figure 1. Case studies: (a) Inelastic wave propagation in ceramics, (b) Deformation and fracture of biomaterials, (c) Nanomechanics of low dimensional materials.

### References

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