Mechanical Engineering
UNIVERSITY OF CALIFORNIA, BERKELEY

Department of Mechanical Engineering

presents

Energy Releasing from Elastic Structures

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Friday, April 18, 2014
1:00 p.m. – 2:00 p.m.
3110 Etcheverry Hall

Coffee and Cookies will be served

ABSTRACT

Can an elastic structure be designed to display Eshelby forces?

Unexpected behaviours will be shown as connected to a release of elastic energy.

Can an elastic structure return on its trivial stable configuration after a buckled postcritical path?

Can a stiffening of an elastic structure decrease the buckling load?

Can more than one buckling load be found for the same bifurcated mode?

Is buckling a Sturm-Liouville problem?

REFERENCES

D. Bigoni, F. Dal Corso, F. Bosi and D. Misseroni, Eshelby-like forces acting on elastic structures: theoretical and experimental proof. Mechanics of Materials, 2013, doi: http://dx.doi.org/10.1016/j.mechmat.2013.10.009.

D. Bigoni, F. Bosi, F. Dal Corso and D. Misseroni, Instability of apenetrating blade. Journal of the Mechanics and Physics of Solids, in press, doi: http://dx.doi.org/10.1016/j.jmps.2013.12.008.

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