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**Alan E Lindsay\*** ([a.lindsay@nd.edu](mailto:a.lindsay@nd.edu)), Department of Applied and Computational Math, 153 Hurley Hall, South Bend, IN 46556. *Regularized post-contact dynamics of elastic-electrostatic deflections.*

In this talk I will discuss the problem of two elastic beams deflecting in an electric field. The beams are held opposite so that they will come into physical contact, if the electric field is strong enough. This contact is manifested as a singularity in the governing PDEs. We introduce a regularized model which is globally well-posed and permits dynamics through the singularity. The post contact dynamics are analyzed with numerical and perturbation methods and detailed interfacial dynamical laws are established and validated. We find new stable equilibrium states which raises the potential for bistability in the system. Estimates on the bistable parameter range are found by means of detailed singular perturbation analysis. (Received February 06, 2017)