1003-J1-903 **Tim McDevitt*** (`mcdevittfive@aol.com`), 3551 Morning Star Place, Laurel, MD 20724.
Animating Beam Theory.

Beam theory is a classical engineering subject that provides a rich variety of interesting physical and mathematical problems ranging from linear, constant coefficient ODE BVPs that admit closed-form solutions to nonlinear PDEs that require numerical solutions. The varying degrees of difficulty allow instructors to easily tune problems to students' abilities and interests. I will present a sample of interesting problems that are accessible to undergraduate students of differential equations with solutions enhanced by computer-generated animations. (Received September 30, 2004)