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Lisa O Coulter* (lcoulter@stetson.edu), Dr. Lisa Coulter, Department of Math / Comp Sci, Stetson University, DeLand, FL 32720. *Euler, the Calculus of Variations, and Some Applications*. Preliminary report.

The calculus of variations is a highly important area of applied mathematics and a beautiful subject in its own right. Yet it is seldom encountered as part of the undergraduate curriculum, except by those students pursuing a physics degree who will no doubt study it in upper division classical mechanics courses. Euler was one of the founders and contributors to this rich field. The author discusses the history of calculus of variations briefly, some applications and concepts which are very accessible to undergraduates, and her own experiences and suggestions, both as a teacher and a student, regarding this field and Euler. These include ideas for incorporating some of this material in both major courses as well as in courses aimed at the liberal arts student. (Received August 16, 2000)