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Kelly M. Bulp* (bulp@ohio.edu) and **Michael A. Smith.** *A Unified Framework for Argumentation and Proof.*

Argumentation and proof are intertwined essentials of the creation and validation of mathematics. Mathematicians use intuitive, informal, and formal reasoning during the processes of developing, testing, refining, and proving conjectures. However, instruction in proof typically presents proving as a linear, formal process devoid of argumentation. In this presentation, we will introduce a framework that identifies key skills, understandings, and activities for developing students' competence in argumentation and proof. This framework can be used as a basis for curriculum design and evaluation, a tool for classroom observation, and a foundation for research on argumentation and proof. (Received September 17, 2013)