

1035-T1-2003 **Larry A Gratton*** (Larry_Gratton@bera.edu), CPO 1934, Berea College, Berea, KY 40404.
Undergraduate Research in Imaging Science. Preliminary report.

A research program in Imaging Science offers the undergraduate in mathematics a wide variety of theoretical and computational problems to investigate in an active and stimulating field of study. Projects may be designed at varying levels of sophistication which build upon the fundamental concepts introduced in core major courses like Calculus, Linear Algebra, Abstract Algebra, and Real Analysis. Computer implementation of techniques gives students a concrete visual representation of abstract ideas along with a working knowledge of industry standard software. In this presentation, one such program, conducted at a small liberal arts college, is discussed in detail. The principles of Imaging Science are presented in the context of core concepts and the goals of the program. Ideas for assessment and future development are discussed. (Received September 21, 2007)