1067-53-1958   **Susan Crook*** (`sbcrook@ncsu.edu`), NCSU Box 8205, Raleigh, NC 27695. *Curve Matching Using Integral Invariants.* Preliminary report.

As a result of its use in medical imaging, aerial photography, and handwriting recognition, curve matching is a significant problem in image analysis. Previous works propose integral invariants as a robust solution for the curve matching problem; however, the approximation techniques applied to these invariants generally result in non-invariant expressions.

We generate a method to systematically find invariant numerical approximations to the existing integral invariants. In this talk, we present examples of integral invariants and the corresponding invariant numerical approximations. (Received September 22, 2010)