1046-14-1451   **Dan Bates**, **Jon Hauenstein**, **Tim McCoy**, **Andrew Sommese** and **Christopher Peterson*** (`peterson@math.colostate.edu`). *Partial decomposition of radical ideals through numerical homotopy and lattice basis reduction.*

In this joint work we illustrate how one can (sometimes) use numerical methods to achieve a partial decomposition of a radical ideal. The main numerical tools are homotopy continuation methods combined with lattice basis reduction. The method is implemented via a Maple interface to the Bertini software package for numerical algebraic geometry. (Received September 15, 2008)