1150-14-363 **Elise Walker*** (walkere@math.tamu.edu), **Michael Burr** (burr2@clemson.edu) and **Frank Sottile** (sottile@math.tamu.edu). *Toric degenerations, finite Khovanskii bases, and the Khovanksii homotopy.* Preliminary report.

Homotopies are useful numerical methods for solving systems of polynomial equations. I will present such a homotopy method using Khovanskii bases. Finite Khovanskii bases provide a flat degeneration to a toric variety, which consequentially gives a homotopy. The polyhedral homotopy, which is implemented in PHCPack, can be used to solve for points on a general linear slice of this toric variety. These points can then be traced via the Khovanskii homotopy to points on a general linear slice of the original variety. This is joint work with Michael Burr and Frank Sottile. (Received July 13, 2019)