1046-30-350 **Ken Stephenson*** (kens@math.utk.edu), **Elias Wegert** and **David Bauer**. *discrete conformal flows in circle packing.* Preliminary report.

A **discrete analytic function** $f : Q \to P$ is a mapping between circle packings which preserves tangency and orientation. The circles manifest a given pattern of tangencies, an abstract combinatorial structure K, and packings Q and P each endow K with a geometric structure. As a geometric mapping, f turns out to be intrinsically 'conformal' in nature, hence our interest in circle packings.

For a fixed combinatorial pattern K, the collection $\mathcal{F} = \mathcal{F}_K$ of locally univalent circle packings for K is a discrete model for the collection of locally univalent analytic functions on the unit disc. We realize $\mathcal{F}$ as a smooth variety $\mathcal{V} \subset \mathcal{R}^N$ and discuss parameterized curves in $\mathcal{V}$. These curves represent a form of "curvature flow". Examples of discrete curvature flow will be shown with a view to their classical analogues. (Received August 27, 2008)