

1106-VG-2385      **Atila Sit\*** ([atilla.sit@eku.edu](mailto:atilla.sit@eku.edu)) and **Daisuke Kihara**. *Local Image Comparison Using Krawtchouk Moment Invariants*.

A new set of local moment invariants based on Krawtchouk polynomials is proposed for comparison of local patches in 2D images. Being computed from discrete functions, these moments do not carry the error due to discretization. Unlike many orthogonal moments which usually capture global features, Krawtchouk moments can be used to compute local descriptors from a region-of-interest in an image. This can be achieved by changing two parameters, and hence shifting the center of interest region horizontally and/or vertically. This property enables comparison of two arbitrary local regions. Krawtchouk moments are shown to be written as a linear combination of geometric moments, so easily converted to rotation, size, and position independent invariants. Formulations of these invariants will be presented, and their discriminative performance on local comparison of test images will be evaluated. (Received September 16, 2014)