Graz University of Technology

Institut für Geometrie

Geometry Seminar

May 8, 13:45

Seminarraum 2, Kopernikusgasse 24/IV

Groups of Deformable Shapes and Slopes in LBP Pyramids

WALTER G. KROPATSCH

(TU Wien)

We address two current research topics, the modeling of groups of adjacent deformable shapes and the concept of slopes that resulted from the interpretation of LBP pyramids. In both topics we will focus on geometrical (and topological) aspects in order to set the basis for a fruitful scientific discussion. Further topics that will be addressed: motivations from projects in the past: the process of straightening/flattening enables the separation of shape models in a normalized shape and the geometric back-projection of its axis; super-ellipses and Bézier approximations; the construction of topology preserving graph-pyramids and the reconstruction with only the few colors of the top, local binary patterns replace convolution and differentiation to detect critical points, slope regions relate the top level with its receptive fields in the reconstruction.

Michael Kerber, Johannes Wallner