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Shai Dekel* (shai.dekel@ge.com) and **Alexander Sherman**. *Curvelets: A low-level framework for computer vision*.

Curvelets[1] are a recent construction of a tight frame that provides a stable representation of L_2 functions with the property of excellent time-frequency-orientation localization. In [2], the authors show similarities between Curvelets and new models of the human vision system developed by researchers working in Natural Scene Statistics.

In this work, we employ Curvelets as a computational low-level framework for computer vision and present experimental results. We believe that the mathematical properties of Curvelets make them a more suitable framework for computer vision than their predecessors: local Fourier transforms, Wavelets transform or steerable filters.

1. E. Cands, L. Demanet, D. Donoho, and L. Ying, Fast Discrete Curvelet Transforms, *Multiscale Modeling and Simulation* 5 (2006), 861-899.
2. D.L. Donoho and A.G. Flesia, Can recent innovations in harmonic analysis 'explain' key findings in natural image statistics?, *Network: Computation in Neural Systems* 12 (2001), 371-393. (Received May 14, 2007)