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The area distance to a plane curve is an important concept in computer vision – in particular, points where the area distance is not differentiable define skeleton-like objects like the "Medial Axis". However, the classical Euclidean distance leads to a very noisy Medial Axis. In 1998, a paper by Moisin and another by Giblin and Sapiro introduced an "Affine Area Distance" (AAD) that, being based on areas, is less sensitive to noise (but, however, is only defined inside convex curves).

After presenting the necessary background on this new robust distance, we will discuss the following recent results:

- A Monge-Ampere PDE that this AAD solves (Moacyr Silva [2005]);
- Two Fast Marching Algorithms to calculate this AAD (Silva, Teixeira, Craizer, Pesco [2008]);

Finally, we discuss some options about how to extend this AAD to nonconvex curves or to the exterior of convex curves. (Received February 11, 2008)