Level Set Based Methods for Inverse Problems

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We shall discuss new, fast level set based methods for solving a variety of inverse problems. These include: image restoration, interpolating points, curves and surface patches in 3D, and optimization problems involving geometry and constraints, such as those involving frequencies of a two-density inhomogeneous drum. This is joint work with a number of people including: F. santosa, H.K. Zhao, R. Fedkiw, B. Merriman, M. Kang and A. Marquina