Level set methods and applications in image processing (S. Ruuth)

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Evolving interfaces arise in a multitude of application areas including material science, fluid dynamics, computer graphics and image processing. To treat the evolving curves and surfaces arising in these applications, level set methods have been particularly popular. These PDE based methods are robust and naturally handle the evolution of complicated two and three dimensional surfaces that develop sharp corners and change topology. Computer graphics, image processing and computer vision have all recently experienced significant advances through the application of the level set technology.

The talks in this minisymposium highlight some of the recent advances in level set methods and applications in image processing and related subjects.