

**Meeting:** 1003, Atlanta, Georgia, SS 36A, AMS-SIAM Special Session on Mathematical Image Processing, I

1003-49-1341      **Selim Esedoglu\*** ([esedoglu@math.ucla.edu](mailto:esedoglu@math.ucla.edu)), 520 Portola Plaza, Math Sciences Building 6363, Los Angeles, CA 90095, and **Richard Tsai**. *Threshold Dynamics for the Piecewise Constant Mumford-Shah Functional.*

We propose an efficient algorithm for minimizing the piecewise constant Mumford-Shah functional of image segmentation. It is motivated by the threshold dynamics of Merriman, Bence, and Osher for evolving an interface by its mean curvature. We show that a very fast minimization can be achieved by alternating the solution of a linear parabolic partial differential equation and thresholding. (Received October 04, 2004)