

**Meeting:** 1003, Atlanta, Georgia, SS 17A, AMS-SIAM Special Session on Nonsmooth Analysis in Variational and Imaging Problems, I

1003-35-1368      **Luminita A Vese\*** (lvese@math.ucla.edu), 405 Hilgard Avenue, Los Angeles, CA 90095, and  
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An important problem in image analysis is the separation of large scales (cartoon features) from smaller periodic scales (texture) in images. Y. Meyer suggested that models such as Mumford-Shah, Rudin-Osher-Fatemi can be viewed as decomposition models into cartoon and texture, not only as image segmentation, restoration models. In such models, the texture component is modeled by a square-integrable function. Following Y. Meyer, we propose and analyze a model where the textured component is better represented by a generalized function belonging to  $div(BMO)$ , while the cartoon component is a function of bounded variation. Theoretical, approximations and numerical results of image decomposition will be presented. (Received October 05, 2004)