# The Bayesian formulation for radiographic image segmentation of welding defect using Mumford and Shah model

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**Abstract :** In this paper, we propose to use the method ofpiecewise constant level set with the Mumford-Shah model. For imagesegmentation, the Mumford-Shah model needs to find regions andconstant values of the regions, for it we use a variational approachbased on the extraction regional information (mean and variance) forthe process segmentation in an adaptive manner, . Finally, we validate the proposed models by numerical results for radiographic image segmentation

**Keywords :** Level set, Mumford shah model, image segmentation