



Consistent model selection criteria for quadratically supported risks

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We consider a class of model selection criteria and provide sufficient conditions for a given model selection criterion to be consistent for a class of loss functions so called "the quadratically supported risks." The class of loss functions considered in this talk includes the squared loss, Huber loss, logistic loss and quantile loss. We also discuss the pathwise-consistent of the thresholded Lasso and SCAD (or MCP) estimators with the quadratically supported risks. In addition, we propose an adaptive model selection procedure which is consistent.

Keywords: consistent model selection, quadratically supported risks, adaptive model selection