



# **A STATISTICAL APPLICATION OF THE KARUSH–KUHN–TUCKER THEOREM: REL**

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This research introduces the new nonparametric technique: robust empirical likelihood, REL. Robust empirical likelihood employs the empirical likelihood method to compute robust parameter estimates and confidence intervals. The technique uses the Karush–Kuhn–Tucker Theorem to solve a robust version of the empirical likelihood function, thus allowing data analysts to estimate parameters accurately despite any potential contamination. Robust empirical likelihood’s applications include regression models, hypothesis testing, and all areas that use likelihood methods.