
Point process learning: A new statistical approach for point processes

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Résumé

This talk presents a new cross-validation (CV) based statistical theory for point processes, motivated by CV's general ability to reduce overfitting and mean square error. It is based on the combination of two novel concepts for point processes: CV and prediction errors. Our CV approach uses thinning to split a point process/pattern into pairs of training and validation sets, while our prediction errors measure discrepancy between two point processes. The new approach exploits the prediction errors to measure how well a given model predicts validation sets using associated training sets. Having discussed its components and properties, we assess its performance in a common spatial statistical setting and compare its performance to the state-of-the-art.

Mots-Clés: Point process

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