



Department of
Mathematical Sciences

Master's Thesis Defense

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MS Graduate Student

Under the Supervision of Daniel Gervini

Thursday, April 28th
2022 @ 2:30pm



**Mr. Timon
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Robust Estimation of Ornstein-Uhlenbeck Parameters

The standard estimators of the parameter of the Ornstein-Uhlenbeck process are vulnerable to contamination in the data sets. In this thesis more robust estimators for the parameter of the Ornstein-Uhlenbeck process are proposed which use medians instead of means. The scaling for these estimators is more complex and numerical methods must be used. A possible numerical implementation is described. The performance of the standard estimator and the proposed robust estimators are compared on data sets with different levels of contamination and different kind of errors. This thesis shows that the proposed robust estimators can be considerably better than the standard estimator on contaminated data sets.

This event will be held online via. Microsoft Teams: <https://bit.ly/3rKgbVU>

Committee Members:

Prof. Wei Wei and David Spade



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