
Quantification of statistical learning theory for dynamic system identification

Abdelkader Metakalard*¹

¹Centre de Recherche en Automatique de Nancy – CNRS, université de lorraine – France

Résumé

System identification is essential for modeling dynamic systems from experimental data. Statistical learning offers non-asymptotic guarantees but often assumes data independence, which doesn't apply to dynamic systems. This work proposes a new approach addressing machine precision limitations, particularly parameter quantization, to bridge the gap between theory and practice. Special focus is given to hybrid systems with switching modes, a challenging area where most existing studies are limited to linear systems.

*Intervenant