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**UNIVERSITÄT
BERN**

Philosophisch-
naturwissenschaftliche Fakultät

Departement Mathematik und
Statistik

**Institut für mathematische Statistik
und Versicherungslehre**

Kolloquiumsvortrag in Statistik

Dienstag, 22. März 2022, 16.15 Uhr

Hörsaal -203, Alpeneggstrasse 22, 3012 Bern

Prof. Dr. Clément Dombry, Université de Franche-Comté

Title: Stone's theorem and minimax rate of convergence for distributional regression

Distributional regression aims at estimating the full conditional distribution of the response variable given the covariates and is a fundamental tool in probabilistic forecast. In this talk, we prove Stone's theorem for distributional regression. It establishes universal consistency in Wasserstein distance of a large class of models based on local weights. Next we consider minimax rates of convergence on suitable classes of distributions and prove that nearest neighbor and kernel algorithms are rate optimal.