DATE:
Le vendredi 31 janvier 2020 / Friday, January 31, 2020

HEURE / TIME:
16 h / 4:00 p.m.

CONFERENCIER(S) / SPEAKER(S):
Ana-Maria Staicu (North Carolina State University)

TITRE / TITLE:
Longitudinal functional regression: tests of significance

LIEU / PLACE:
HEC Montréal, 3000, chemin de la Côte-Sainte-Catherine, salle Béton Grilli

RESUME / ABSTRACT:
We consider longitudinal functional regression, where, for each subject, the response consists of multiple curves observed at different time visits. We discuss tests of significance in two general settings. First, when there are no additional covariates, we develop a hypothesis testing methodology for formally assessing that the mean function does not vary over time. Second, in the presence of other covariates, we propose a testing procedure to determine the significance of the covariate's time-varying effect formally. The methods account for the complex dependence structure of the response and are computationally efficient. Numerical studies confirm that the testing approaches have the correct size and are have a superior power relative to available competitors. We illustrate the methods on a real data application.

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