



## Conferencia a cargo del prof. Yves Tillé, de la Universidad de Neuchatel.

23/06/2021

### Novedades

El próximo martes 29 de junio tendrá lugar una conferencia del prof. Yves Tillé, de la

Universidad de

Neuchatel, con el título: Some Solutions Inspired by Survey Sampling Theory to Build Effective Clinical Trials

**Lugar y hora: Seminario de la primera planta. Instituto de Matemáticas. 10 h**

**Abstract:** The organization of a design of experiments, for example for the realization of a clinical trial, is crucial. It is often desirable to balance designs so that the means of the covariates are approximately the same in the test and control groups. In survey sampling theory, balanced sampling and calibration are two techniques that improve the precision of estimates. In this paper, we show the links between the two areas. We begin by assessing the gain in precision between a balanced design and a simple random sampling for the least squares estimators and the estimator by differences. We compare rerandomization techniques and the cube method in order to balance the design. We propose a new method, particularly efficient, which combines the cube method with multivariate matching. A set of simulations is carried out in order to evaluate the different methods.

