

## Seminario Aleatorio

*Sesión 396*

### Variance estimation in the survey «Le racisme et les discriminations ethno-raciales au Luxembourg»

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#### Abstract

It is common practice in Statistical Institutes and Research Centers to present the results of surveys in a "standardized" way, i.e.: the estimator of the variable of interest and the associated measurement error. To calculate the measurement error (e.g. a confidence interval) we have to calculate the variance of the estimator. This can be done in two ways: analytically or with replication methods (Bootstrap). The analytical way requires the information of auxiliary variables used in the implementation of the methodology in the survey, both at sample and response level, and these are not always available. This problem might lead to miscalculation of variance. Replication methods fully integrate the methodological plan applied to the survey and serve as a good alternative to the analytical variance calculation. In this session, we will see how to calculate the analytical variance and the Bootstrap variance on a practical example with the survey on "Racism and Ethno-racial Discrimination" carried out in Luxembourg in 2021.

**Viernes 28 de octubre de 2022,  
11:00 horas de CDMX,**

<https://itam.zoom.us/j/92511938328?pwd=c0orVEUzc2l2VUovdFVJajJ5ZEFhdz09>

ID de reunión: 925 1193 8328

Código de acceso: 735376

El Seminario Aleatorio del Departamento de Estadística del ITAM está destinado tanto a profesores como a estudiantes, por lo que se agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.