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Seminar

Speaker: **Professor Valentin Patilea**
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Title: **Conditional Moment Restriction Models with Data Missing at Random**

Time: **12:00 – 1:00pm, Tuesday, April 28, 2015**

Place: **552 Hill Center**

Abstract

We consider a general statistical model defined by moment restrictions when data are missing at random. Using the inverse probability weighting, we show that such a model is equivalent with a model for the observed variables only, augmented by a moment condition defined by the missing mechanism. In particular, our framework covers parametric and semiparametric mean regressions and quantile regressions. We allow for missing responses, missing covariates and any combination of them. The equivalence result is obtained under minimal technical conditions and sheds new light on various aspects of interest in the missing data literature, as for instance the double-robustness, imputation, the restricted estimators and the puzzling efficiency of the procedures based on the estimated, rather than known, selection probabilities. It also provides a general framework for building (efficient) estimators. Moreover, as an immediate consequence of our general theory, we derive the efficiency of the complete cases analysis in a general semiparametric regression model with responses missing at random.

Key Words: Double-robustness; Efficiency bounds; Imputation; Inverse probability weighting; MAR assumption; Moment restrictions models; Semiparametric regression; Restricted estimators.

The working paper is available here

[http://ensai.fr/files/ media/documents/Enseignants%20chercheurs%20-%20doctorants/vpatilea%20-%20documents/cmrmiss_website_ensai_5dec2014.pdf](http://ensai.fr/files/media/documents/Enseignants%20chercheurs%20-%20doctorants/vpatilea%20-%20documents/cmrmiss_website_ensai_5dec2014.pdf)

**** Refreshments will be served 11:40pm in Room 502 Hill Center ****