**March 28th, 2016**
**KAP 414**
**2:00 P.M. – 3:00 P.M.**

# Professor Yuri Saporito

(Fundacao Getulio Vargas, Brazil)

## "Recent Developments on Functional Itô Calculus – Lie Bracket and Tanaka Formula"

**Abstract:** The functional Itô formula, firstly introduced by Bruno Dupire for continuous semi-martingales, might be extended in two directions: different dynamics for the underlying process and/or weaker assumptions on the regularity of the functional. In this talk, we will discuss the functional version of the Meyer-Tanaka Formula for the class of convex functionals. Moreover, we will introduce a measure of path-dependence of functionals within the functional Itô calculus framework. Namely, we consider the Lie bracket of the space and time functional derivatives, which we use to classify functionals according to their degree of path-dependence.