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#### **SEMINARIO**

## **OPTIMIZACIÓN Y EQUILIBRIO**

### **Expositor**

# Profesor Marc Lassonde, Université des Antilles, Guadeloupe, et LIMOS, Clermont-Ferrrand

#### Title

"Recovering a function from a subdifferential"

### **Abstract:**

The issue of recovering a function from its derivative or one of its directional derivatives is a central issue that dates back to the seminal work of Lebesgue (1904). The question of recovering a function from its subdifferential is more recent and has been the subject of intensive research in recent years, since the seminal work of Moreau and Rockafellar (1970) on convex functions, up to the many successive works of Thibault and his co-authors on increasingly broad classes of functions beyond the convex functions.

The talk focuses on this issue. We divided the problem into two parts: first recover the directional derivative of a function from its subdifferential, then recover the function from its directional derivative. The key point is the first part that is based on a universal duality formula linking directional derivative and subdifferential of lower semicontinuous functions, for arbitrary subdifferentials.

Miércoles 23 de Marzo a las 16:30 hrs, Sala de Seminarios John Von Neumann CMM, Piso 7 Torre Norte de Beauchef 851.



