



## **COLLOQUIUM**

### **DEPARTAMENTO DE MATEMÁTICAS**

### **UNIVERSIDAD CARLOS III DE MADRID**

- **Pere Ara** (Universidad Autónoma de Barcelona)

Viernes, 14 de mayo de 2010

*Operator Algebras: an Extraordinary Legacy of von Neumann*

**Abstract:**

*The theory of operator algebras was developed by John von Neumann in a series of papers written throughout the second quarter of the past century, some of them in collaboration with F.J. Murray. The algebras nowadays known as von Neumann algebras are subalgebras of the algebra of all linear bounded operators on a Hilbert space, closed under the operation of taking the adjoint and closed with respect to the so-called strong operator topology. The concepts introduced by von Neumann were completely innovative and today are still being developed in a fertile and vigorous way. In my talk, I will explain some of the basic elements of this theory, and I will give an overview of some of the multiple areas in Mathematics where the work of von Neumann on operator algebras has had a significant influence, such as knot theory and Alain Connes' non-commutative geometry.*

**Hora: 15:30**

**Lugar:** Seminario del Departamento de Matemáticas  
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