



# Colloquium del Departamento de Análisis Matemático

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**“Peano Curves on Topological Spaces ”**

**Martes 13 de Mayo de 2014**

a las 13:00 horas en el seminario 222

**Abstract:**

The starting point of our work is the existence of Peano curves, that is, continuous surjections mapping the unit interval onto the unit square. From this fact one can easily construct of a continuous surjection from the real line onto any Euclidean space. The algebraic structure of the set of these functions (as well as extensions to spaces with higher dimensions) is analyzed from the modern point of view of lineability, and large algebras are found within the families studied. We go forward and investigate this on topological vector spaces that are continuous image of the real line, providing an optimal lineability result and several examples of it.

(Joint work with L. Bernal, D. Pellegrino and J. B. Seoane Sepúlveda)

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