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**CENTRO DE MATEMÁTICA E APLICAÇÕES FUNDAMENTAIS**
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# Mês de: NOVEMBRO 2014

## SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

**Dia 20 de Novembro (quinta-feira), às 13:30h, na Sala B3-01**

## Special Topics on the Completion of the Space of Henstock-Kurzweil Integrable Functions

**Luis Ángel Gutiérrez Méndez**
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**Abstract:**

It is a known fact that the Henstock-Kurzweil integral extends the Lebesgue integral, so it is very important to know about this space of functions; therfore, in this talk, I present the results obtained, along of my Phd and under the supervision of my advisor, referents to the completion of the space of Hentock-Kurzweil integrable functions endowed with the Alexiewcs norm; particularly, I will mention what properties of the Theory of Banach Spaces be hold in this space. For example, I will show that this space has the Dunford-Pettis property; the reciprocal Dunford-Pettis property; a Schauder basis which is not unconditional, neither boundedly complete nor shrinking; a complemented subspace isomorphic to $c_0$; a copy not complemented of $l_1$. Furthermore, we will see that this completion is not weakly sequentially complete nor isomorphic to the dual of any normed space; and, finally, I will mention some properties of Functional Analysis that be hold in certain classes of linear operators defined on this space.

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