

# SEMINÁRIO

## ANÁLISE E EQUAÇÕES DIFERENCIAIS

29 junho | 14:00 | sala 6.2.33

### On short wave-long wave interactions in the relativistic context

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**Abstract:**

In this talk we introduce models of short wave-long wave interactions in the relativistic setting. In this context the nonlinear Schrödinger equation is no longer adequate for describing short waves and is replaced by a nonlinear Dirac equation. Two specific examples are considered: the case where the long waves are governed by a scalar conservation law; and the case where the long waves are governed by the augmented Born-Infeld equations in electromagnetism. This is a joint work with João Paulo Dias.

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