

Mês de: JANEIRO 2014

**SEMINÁRIO DE ANÁLISE E EQUAÇÕES
DIFERENCIAIS**

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

Dislocations at the continuum scale: current formalism and
constraint reaction

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Abstract:

In this talk a model for dislocations at the mesoscale is proposed which makes use of the current formalism. Countable families of dislocation lines are modelled as integer multiplicity 1-currents and the associated deformation field as a Cartesian map away from the lines. The constraint to be satisfied between the deformation and the dislocation density fields generates a pseudo-force, understood as a line tension in the dislocations. The existence of such a constraint reaction is analysed in appropriate function spaces, where intensive use is made of Helmholtz-type decompositions for tensor fields.

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