## Centro de Matemática — Universidade do Porto

### Geometry and Topology Seminar

## Deformations of holomorphic groupoids.

## João Nuno Mestre

Centro de Matemática da Universidade de Coimbra (CMUC) .

**Abstract.** Lie groupoids can encode geometric objects such as smooth actions, and foliations; deformations of Lie groupoids also relate to deformations of such objects. In this talk we'll see the deformation cohomology of a (real) Lie groupoid, mention a few relations to the mentioned examples, and and how a interpretation in terms of vector bundles over a Lie groupoid can be used to study deformations of holomorphic groupoids.

The deformation complex obtained for a holomorphic groupoid arises as the total complex of a double complex. It combines the deformation complex of the groupoid structure and the Kodaira-Spencer complex controlling deformations of the underlying complex manifold. The talk is based on ongoing work with Luca Vitagliano.

**Friday, June 16**     **15h30**     **Room: FC1.0.31**