U LISBOA | UNIVERSIDADE DE LISBOA

# Seminário CEAFEL*

## 16 de Outubro - 15H00 - sala 6.2.33

## Infinite friezes

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Abstract:
Frieze patterns were introduced by Coxeter who subsequently studied them in collaboration with Conway. Together, they gave a characterisation of frieze patterns in terms of triangulations of polygons, establishing that every frieze pattern has an associated triangulation of a polygon and vice versa. This was later extended by Broline, Crowe and Isaacs who showed that all of the entries of a frieze pattern can in fact be obtained from its associated triangulation of a polygon via matchings of triangles to the vertices of that polygon.

After briefly recalling the definition of frieze patterns and illustrating the above results, we will focus on joint work with Baur and Tschabold on 'infinite friezes' (which differ from Conway-Coxeter frieze patterns in that they have infinitely many rows), in which results analogous to the classical theory are proved. In particular, we will see that the periodic infinite friezes have a characterisation in terms of triangulations of punctured discs and annuli. Moreover, the entries of such a frieze can be obtained from any associated triangulation via matchings.

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