



Centro de Investigação em Matemática e Aplicações  
Programa de Doutoramento em Matemática  
Departamento de Matemática

## **Seminário**

**14 de junho de 2017 quarta-feira**  
**CLAV – Anfiteatro 1 - 11:00 horas**

### **Mather-Yau theorem in positive characteristic**

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## **Abstract**

The well-known Mather-Yau theorem says that the isomorphism type of the local ring of an isolated complex hypersurface singularity is determined by its Tjurina algebra. It is also well known that this result is wrong as stated for power series  $f$  in  $K[[x]]$  over fields  $K$  of positive characteristic. In this talk we will see that, however, also in positive characteristic the isomorphism type of an isolated hypersurface singularity  $f$  is determined by an Artinian algebra, namely by a "higher Tjurina algebra" for sufficiently high index, for which we give an effective bound. We prove also a similar version for the "higher Milnor algebra" considered as  $K[[f]]$ -algebra. This is a joint work with Gert-Martin Greuel.

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