

### Statistical stability for Luzzatto - Viana maps

**Dr. Dalmi Gama**

University of Porto, FCUP

#### Resumo

In this talk we will give sufficient conditions for the statistical stability for Luzzatto - Viana maps, in a strong sense. Actually, we show that for each parameter the family of maps has non-uniform expanding behavior and slow recurrence to the critical/singular set, thus we obtain that the volume of tail set decays exponentially. In this setting, we improve the result obtained by Araújo, Luzzatto and Viana (2009), where it was proved the existence of a finite number of the physical measures. Here, we prove the uniqueness of these measures. As an application of our results we obtain some statistical properties of the measure.

**21/11/2018 - 16h30 - Sala 6.26**

#### Palavras chave:

Non-uniform expansion, slow recurrence, statistical stability.

#### Referências:

Alves, J. (2004). Strong statistical stability of non-uniformly expanding maps. *Nonlinearity*, 17(4), 1193-1215.

Araújo, V., Luzzatto, S., Viana, M. (2009). Invariant measures for interval maps with critical points and singularities. *Advances in Mathematics*, 221(5), 1428-1444.

Luzzatto, S., Viana, M. (2000). Positive Lyapunov exponents-for Lorenz-like families with criticalities. *Asterisque*, 261(201), 237.