

## COE-MASS WEEKLY SEMINAR SERIES

Prof Carlos A. Coelho

*(NOVA School of Science and Technology / Mathematics Department and  
Research Centre for Mathematics and its Applications (NOVA-Math),  
NOVA University of Lisbon)*

**Friday, 28 June 2024  
10h30-11h30**

### ***An outlier test for the high-dimensional case***

An outlier test, which is indeed a likelihood ratio test, that may be used in both the high-dimensional case and in the non-high-dimensional case is presented. In the non-high-dimensional case its performance is compared with Wilks test for outliers, showing its adequacy as an outlier test for this situation. Then its application in the high-dimensional case is illustrated. One interesting feature of the present test which makes it particularly fit for the high-dimensional case is its asymptotic Normal distribution, which is asymptotic for the number of variables, and which works for any sample size. Exemplifications of the use of the test are carried out with real datasets.



**Watch online:** <https://www.wits.ac.za/coe-mass/news-and-events/>

**Attend in-person:** 1st floor Seminar Room, TW Kambule Building, West Campus,  
University of the Witwatersrand, Johannesburg.

