

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

Seminário (online)
16 de fevereiro de 2022, 15h

**Review of certain results on cumulants and higher order probability
distribution cumulants**

Sandra Ferreira

Center of Mathematics and Applications, University of Beira Interior, Covilhã

Abstract: In this presentation, a review of results on cumulants is made and a study of cumulants of higher-order probability distributions is presented, which correspond to sets of quantities that provide an alternative to the distribution moments. The well-known higher order cumulants are variance (second order), skewness (third order), measurement skewness and kurtosis (fourth order), measuring 'peak' of the probability distribution. Of particular interest is the fourth cumulant. Next, multivariate cumulants are presented and it is shown that the relationship between moments and cumulants is simpler in the multivariate case. It is considered an application of cumulants in mixed linear models.



UNIVERSIDADE DE ÉVORA
ESCOLA DE CIÊNCIAS E TECNOLOGIA
DEPARTAMENTO DE MATEMÁTICA



UIDB/04674/2020

FCT
Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

 **REPÚBLICA
PORTUGUESA**
XXII GOVERNO