A new variability order based on tail-heaviness

Alfonso Surez-Llorens (alfonso.suarez@uca.es, University of Cdiz)
Miguel A. Sordo Daz (mangel.sordo@uca.es, University of Cdiz)
Marilia C. de Souza (marilia.conceideso@mail.uca.es, University of Cdiz)

We introduce a new variability order that can be interpreted in terms of tail-heaviness which we will call the tail dispersive order. We provide the new definition, its interpretation and properties and the main characterization. We also study the relationship with other classical variability orders. Finally we study the tail dispersive order in some classical parametric families and provide some applications in insurance and finance. We conclude with a numerical example applied to log returns distributions.