Einladung zum

Würzburger Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

Michael Falk

Julius-Maximilians-Universität Würzburg

An Offspring of Multivariate Extreme Value Theory: D-Norms

Mittwoch, der 22. Jan. 2020 • 16:15 Uhr

Graduate School of Life Sciences, Beatrice-Edgell-Weg 21, Campus Hubland-Nord

Inhaltsangabe:

Multivariate extreme value theory (MEVT) is the appropriate mathematical toolbox for analyzing several extremal events simultaneously. However, MEVT is by no means easy to access; its key results are formulated in a measure theoretic setup in which a common thread is not visible.

Writing the *angular measure* in MEVT in terms of a random vector, however, provides the missing common thread: Every result in MEVT can be formulated using a particular kind of norm on multivariate Euclidean space, called a D-norm. Deep results turn out to be elementary and easily seen properties of D-norms.

Norms are introduced in each introductory course on mathematics as soon as the multivariate Euclidean space is introduced. The definition of an arbitrary D-norm requires only the additional knowledge of random variables and their expectations. But D-norms do not only constitute the common thread through MEVT; they are of mathematical interest of their own.



https://www.mathematik.uni-wuerzburg.de/de/aktuelles/kolloquium/

