Host: Univ.-Prof. Dr. Hans Manner

INVITATION

Joint seminar in Statistics with TU Graz

Assoc.- Prof. Dr. Pavlo Mozharovskyi

(Télécom Paris, LTCI)

On the topic:

"Depth for curve data and applications"
(with Lafaye De Micheaux, P. and Vimond, M.)

In 1975, John W. Tukey defined statistical data depth as a function that determines the centrality of an arbitrary point with respect to a data cloud or to a probability measure. During the last decades, this seminal idea of data depth evolved into a powerful tool proving to be useful in various fields of science. Recently, extending the notion of data depth to the functional setting attracted a lot of attention among theoretical and applied statisticians. We go further and suggest a notion of data depth suitable for data represented as curves, or trajectories, which is independent of the parameterization. We show that our curve depth satisfies theoretical requirements of general depth functions that are meaningful for trajectories. We apply our methodology to diffusion tensor brain images and also to pattern recognition of handwritten digits and letters. Supplementary materials for this article are available online.

Date: June 27, 2023
Starting time: 5.15 p.m.
Location: HS 111.21

All professors, lecturers, assistants and students are cordially invited to this lecture!