UiO : University of Oslo

Department of Mathematics
Section of Statistics and Biostatistics

Seminar Series in Statistics and Data Science

15.03.2019, 14:15 @ Erling Sverdrups plass, Niels H. Abels hus, 8th floor

Steve Marron: Joint and Individual Variation Explained

Abstract: A major challenge in the age of Big Data is the integration of disparate data types into a data analysis. That is tackled here in the context of data blocks measured on a common set of experimental subjects. This data structure motivates the simultaneous exploration of the joint and individual variation within each data block. This is done here in a way that scales well to large data sets (with blocks of wildly disparate size), using principal angle analysis, careful formulation of the underlying linear algebra, and differing outputs depending on the analytical goals. Ideas are illustrated using mortality, cancer and neuroimaging data sets.

Steve Marron
University of North Carolina at Chapel Hill (USA)

Dr. James Stephen Marron is the Amos Hawley Distinguished Professor in UNC's Department of Statistics and Operations Research as well as a professor in the Department of Biostatistics at the UNC Gillings School of Global Public Health. Dr. Marron's current interests are in the area of analyzing data that lie in non-standard spaces. The contexts include High Dimension Low Sample Size (HDLSS) data,and/or data exotic data types such as manifold and tree-structured data. An overarching framework for this research is Object Oriented Data Analysis (OODA). This work is motivated by collaborations in cancer research, genetics, image analysis, evolutionary biology, drug discovery and toxicology.

Next seminar

26.03.2019 @ 14:15
Andrea Cremaschi (Oslo University Hospital)

Contact Information

Riccardo De Bin – debin@math.uio.no
Emanuele Gramuglia – emanueg@math.uio.no