**CALL FOR APPLICATIONS**

We are pleased to announce that the Joint Advanced School, organized under the auspices of [CLADAG](http://cladag.it/about/) and [ERS-IASC](https://iasc-isi.org/ers-mission/), on

[ROBUST STATISTICS:   
FOUNDATIONS AND RECENT DEVELOPMENTS](https://rsfd.lakecomoschool.org/)

will take place on May 2-6, 2022, at [Villa del Grumello](https://www.villadelgrumello.it/it/), on the shores of the [Lake of Como](https://www.lakecomo.is/it/), Italy.  
  
LECTURERS

[**Anthony Atkinson**](https://www.researchgate.net/profile/Anthony_Atkinson3)**, London School of Economics, UK**[**Agustin Mayo-Iscar**](https://www.researchgate.net/profile/Agustin_Mayo)**, University of Valladolid, ES**[**Marco Riani**](https://www.researchgate.net/profile/Marco_Riani)**, University of Parma, IT**

[**Francesca Greselin**](https://www.researchgate.net/profile/Francesca-Greselin)**, University of Milano-Bicocca, IT**

**RobustStatistics@ComoLakeSchool is focused on giving a perspective on the modern challenges of robust statistics, combining novel statistical methodologies with open problems in different application fields.**

PROGRAM  
Robust statistics is at the forefront of statistical research, and a central topic in multidisciplinary science where mathematical ideas are used to model and understand the real world.

It is almost inevitable, when analyzing big data, to have to cope with errors or outliers. An outlier is an observation (or subset of observations) that is inconsistent with the rest of the data set. Robust Statistics aims at reducing the incorrect measurement risks generated by outliers.

While outliers are generally easy to identify in low dimensional datasets, when it comes to multivariate data, or even heterogeneous multivariate data, this task becomes very difficult and must be based on a solid foundation.

In some applied fields, often the so-called "outliers" are of paramount interest (fraud detection is an example). Sometimes, additionally, outliers might cluster in such a way that they become interesting for their own pattern, which can be properly disentangled from the bulk of the data with the aid of robust methods.

The aim of the course is three-fold:

* present novel robust models to describe real-world phenomena and their properties;
* study their behavior under different kinds of contamination;
* discuss their implementation through computational methods in R and Matlab, with extensive applications to real data, in various fields such as demography, economics, genetics, image analysis, spectroscopy and many others.

The topics covered by the course include regression, multivariate analysis, transformations, unsupervised classification, and functional analysis. The school is designed for postgraduate development for both researchers and professional data analysts.

[APPLICATIONS:](https://rsfd.lakecomoschool.org/registration/)  
In order to foster active interaction among students and instructors, the school is targeted for a class of at most 30 qualified and selected participants. Deadline for applications: March 15, 2022.

For more information, please email to francesca.greselin@unimib.it