



IASC: Statistical Computing for Data Science

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In a time when areas as genomics, natural language processing, security and fraud detection, finance or the web and social media, keep producing new and increasingly complex data, it becomes clear that more than ever collaborative work is essential for the collection, analysis, interpretation, presentation and organization of data – the objective of Statistics. Statistical Computing, “aiming at the design of algorithms for implementing statistical methods” is here mainly concerned. To appropriately address the new challenges they are presented nowadays, computational statisticians often need combining statistical thinking with computer science skills, database management and knowledge representation expertise. And it is at this crossroads that Statistical Computing meets Data Science. This recent and quickly evolving area is generally defined as the extraction of knowledge from data, using methods from different fields as Statistics, Computer Science, Machine Learning, Information Theory, Pattern Recognition, and Visualization. It has been said that “Data Science represents an inevitable (re)-merging of computational and statistical thinking in the big data era”. These are no doubt challenging and exciting times for (computational) statisticians!

The International Association for Statistical Computing (IASC), whose objectives are “to promote the theory, methods, and practice of statistical computing and to foster interest and knowledge in effective and efficient statistical computing through international contacts among researchers and professionals in statistics, computer science, and related areas” has in this context clearly an important role to play. In this talk, we shall therefore discuss the link between Statistical Computing and Data Science, and present the Association’s initiatives to pursue its objectives.

Keywords: Statistical Computing; Data Science; Big Data.