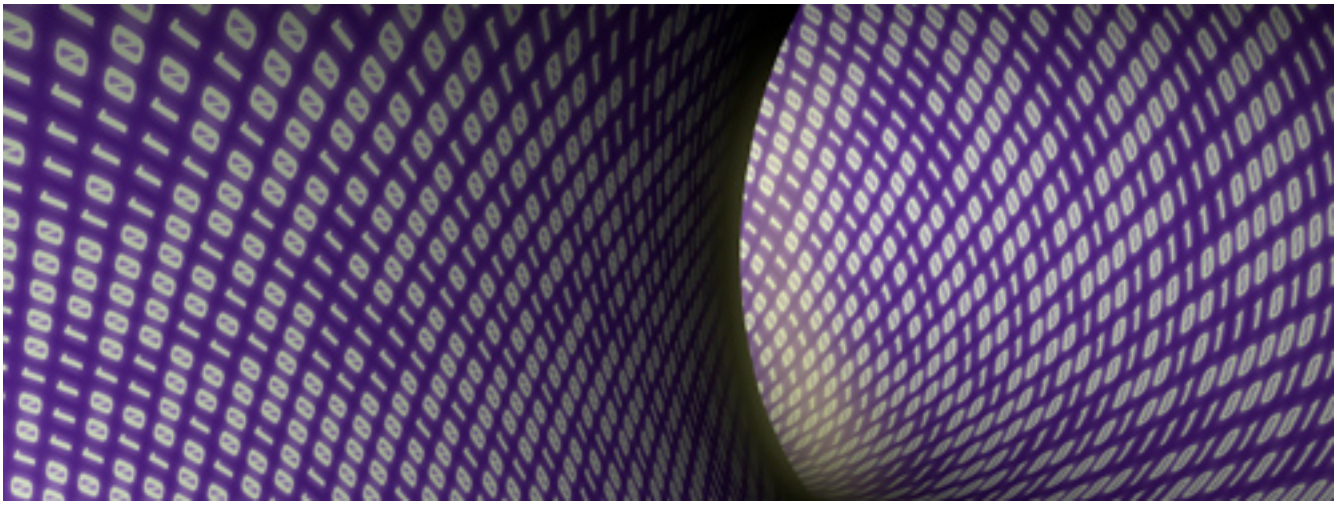
Big Data and Science: Relevance of Computational Sciences for Data Collection, Data Storage and Data Management in Basic and Applied Scientific Investigations



One of the distinctive features of contemporary scientific research, in both basic and applied sciences, is the large amount of data that is continuously being produced. Quite frequently, data production exceeds the capacity of the available tools for its proper analysis and interpretation, being genomics a paradigmatic example of this situation. Therefore, the use of the most advanced methodologies for data management is of key importance for a successful research enterprise.

In recent years, major advances have taken place in the field of Computational Sciences. They have not only facilitated gaining access to new data in all fields of research, but they have also led to a more efficient processing of the information. These innovations are producing a major impact in the way scientific research is currently conducted. Since collected data becomes readily accessible to potential users, collaborative projects are more common than ever before.

This workshop does not intend to encompass all fields of research in which data management is relevant. Instead, its aim is to present specific examples of appropriate collection, storage and management of data, taken mainly from the Life Sciences, Earth Sciences and Astrophysics. It is expected that sharing experiences among various fields may lead to new opportunities for interdisciplinary research.

This can be expected to provide advice and help for basic and for applied research projects in future scientific investigations. We hope that this workshop provides a unique opportunity for interdisciplinary discussion on big data and sciences.