The journal *Advances in Data Analysis and Classification* will publish a Special Issue on *Innovations in Model-Based Clustering and Classification*.

Model-based Clustering and Classification is an increasingly active area in both theoretical and applied research. This area includes probabilistic models for classifying and clustering data, mixture models, statistical learning methods for data classification, thus producing partitions, coverings, fuzzy partitions, hierarchies, in the framework of the supervised and unsupervised classification. The potential of such modeling approaches has become more and more apparent in the very last decades.

The increasing tendency to collect datasets, with a large number of units and variables of both numerical and categorical type, in almost any area of scientific research, provides new challenges in model-based clustering. This calls the development of new approaches that take into account the extraction of the essential features and are able to represent underlying hidden structures and relations in data. Advances in this field should provide a principled statistical approach to a variety of still open and crucial questions like variable selection, robust classification, the choice of the number of model components, cluster recovery from noisy data, dimensionality reduction, robust estimation of parameters, efficient algorithms for parameter estimation, etc.

Topics of particular interest may include, but are not limited to:

- Methodological innovations in all fields of model-based classification and clustering.
- Developments and applications of model-based classification and clustering methods in specific domains such as bioinformatics, biostatistics, business, data mining, finance, image analysis, machine learning, marketing, medicine, pattern recognition, etc.
- Development of specific computational and graphical tools.
- Robust modeling for data classification.

Researchers and practitioners are kindly requested to submit relevant and innovative papers for publication in this Special Issue.

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1 This is the main topic of the third Workshop on Model Based Clustering and Classification (MBC² 2018) that was held at the University of Catania (Italy) on 5-7 September, 2018. See: http://mbc2.unict.it/
Submitted papers must contain original unpublished work that has not been submitted for publication elsewhere. All manuscripts submitted to this Special Issue will undergo the classical double-blind reviewing process.

Submission details. Papers should be written in LaTeX, and not exceed 20 pages (A4 or Letter size with 12 point, fully double-spaced font), including illustrations and tables. The front page of the manuscript must contain a concise and informative title, the names, affiliations, and addresses of all the authors, the e-mail address, telephone, and fax number of the corresponding author, an abstract of 150 to 250 words, and 4 to 6 keywords which can be used for indexing purposes. Further formatting instructions are given on the journal’s homepage http://www.springer.com/journal/11634.

Manuscripts should be submitted by the electronic submission system of ADAC: https://www.editorialmanager.com/adac/.

Important dates:
- Submission of full papers for the Special Issue: December 15th, 2018 (earlier submission is encouraged).
- Notification to authors: March 31, 2019 (tentative).
- Final papers: June 30, 2019 (tentative).

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