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COMPUTATIONAL STATISTICS & DATA ANALYSIS
Second Special Issue on
Computational Statistics for Clinical Research
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Guest Editors:
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EXTENDED DEADLINE for submission is 30 September 2010.

We are inviting submissions for the 2nd special issue of Computational Statistics and Data Analysis. It addresses statistical methods and computational data analysis approaches in the design and/or analysis of clinical studies. The topics covered are pharmaceutical clinical trials for the detection and characterization of better treatments, explorative clinical studies for diagnosis, and understanding the pathogenesis of diseases, their treatment, the determination of prognostic and predictive factors, and the impact of genetic information on the design and evaluation of clinical outcomes.

Anticipating for the future an increasing use of large data sets by clinical researchers, both in terms of sample size and in terms of the number of patients' characteristics measured, new appropriate and efficient computational methods and data analysis approaches are urgently needed. Whereas extraordinary efforts and large investments were devoted to increase the quality of clinical data, much less has been invested in the development and dissemination of best computational statistics methods fit for clinical research purposes.

The special issue will include
* design and data analysis for Phase I, II, III trials
* pharmacokinetics and dose finding studies
* exploratory analysis and prognostic factors
* studies on genetic factors in clinical trials
* diagnostic studies and biomarker evaluation
* longitudinal data analyses and safety evaluation
* pharmacogenetic and pharmacogenomic data
* predictive factors and medical decision making
* treatment outcome prediction with genomic/proteomic data
* incorporating genetic data into clinical trial design of targeted agents
* treatment allocation and adaptive designs
* meta analyses and interpreting clinical trial results
* Bayesian methods
* medical informatics and bioinformatics
* graphical data to explore multivariate associations
* competing risks and multistate models
For this special issue we are now soliciting papers that address statistical and computational aspects of the design or analysis of clinical studies. Theoretical papers or papers with simulation as the main contribution are not suitable for the special issue. However overviews are welcome if they provide new and original work able to promote research.

In addition, the journal offers authors the possibility to enhance their articles by including data sets along with the online article. These files will appear embedded in the article on ScienceDirect at www.sciencedirect.com/science/journal/01679473. The files will be freely available at this site. Copyright of the files will remain with the authors and their use will require the citation of the related article (journal, author, title and date of the publication). No liability is assumed by the contributors, the publisher, or the IASC.

Submission must contain original unpublished work and both, a computational and a medical or clinical component, preferably combined with a substantive application. This can include comprehensive review papers that are not being submitted for publication elsewhere. The deadline for submissions is 30th June 2010. Authors who are uncertain about the suitability of their papers should contact one of the special issue editors. All submissions must contain original unpublished work not being considered for publication elsewhere.

Papers should be submitted using the Elsevier Electronic Submission tool EES: http://ees.elsevier.com/csda. In the EES please chose the special issue on "Computational Statistics for Clinical Research". Submissions will be refereed according to standard procedures for Computational Statistics and Data Analysis (CSDA). Information about the journal can be found at http://www.elsevier.com/locate/csda. The CSDA is indexed in Science Citation Index (Web of Science).

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