# STATISTICAL MODELLING

## AN INTERNATIONAL JOURNAL

**Special Issue: Statistical Modelling for Sports Analytics**

The use of statistical analysis and modelling techniques in sports has gained a rapidly growing interest over the last decades, as documented by the extensive scientific production on this topic and the publication of several insightful collections of statistical analyses applied to data from a wide range of sports, including soccer, tennis, American football, baseball, basketball amongst many others.

To foster the application of statistical modelling techniques in sports, *Statistical Modelling* agreed to publish a special issue with articles that promote and disseminate knowledge that represents important developments, extensions, and applications on statistical modelling in sports.

Therefore, we invite researchers to contribute articles for a special issue that aim to propose modelling developments that may incorporate new statistical / machine learning methods and techniques of sport analytics, covering both methodology and practice. Submissions must reflect important developments, extensions, and applications in statistical modelling. We encourage submissions that describe scientifically interesting, complex or novel statistical modelling aspects from the whole diversity of sports disciplines, including non-professional sports.  All articles should follow the following guidelines:

- *Combining methodology and practice*: All submissions must cover statistical modelling aspects, i.e. aspects from both methodology and practice, not just methodology *OR* data analysis. They should be based upon a problem of real substantive interest with appropriate data. Papers that merely propose and study the properties of new methodology based on a standard or well-known model are not appropriate.
- *Novelty and practical relevance*: All submissions should be using modern cutting edge statistical modelling techniques that are newly developed in the papers by the authors or have been used rarely (if ever) in the past in analyses of the sport under investigation, with the papers showing why this use of models results in important new knowledge about the specific sport. Further, papers should provide justification as to why the work is important to the subject area, and provides gains beyond current methodology applied to the specific sports field. The methodology used should be modern and reasonably sophisticated (although not necessarily innovative) and should have few or no applications so far in the sports analytics literature.
- *Reproducibility*: Readers should be able to reproduce the results presented in published articles, apply the published techniques to their own problems, and even develop their own extensions of the methodology. To achieve this authors are strongly encouraged to make data (or at least their simulated counterpart) and software available provided as electronic supplements. Code should not primarily be included in the article itself although including code snippets is fine if it supports the general aim of the article.

Before submitting their contribution, authors are kindly asked to submit a title together with an extended abstract, which are needed by the editors before starting the peer review process.

**Topics:**

The special issue aims at bringing together articles focusing on (but not limited to):

- Statistical methods for prediction
- Game outcome models
- Measurement and evaluation of player performance
- Tournament structure
- Analysis of referee decisions
- Within-game strategies
- Player and team ranking methods

**Time frame:**

- Submission of titles and extended abstracts: December 1, 2017
- Submission of manuscripts: February 1, 2018
- Publication of the special issue: by the end of 2018

**Guest editors:**

- Andreas Groll
- Marica Manisera
- Gunther Schauberger
- Paola Zuccolotto

**Submission:**

Please submit suitable manuscripts in **PDF format** via email to [agroll@uni-goettingen.de](mailto:agroll@uni-goettingen.de)