

Editorial of the Special Issue “Sport and Statistics”

Title: Editorial du numéro spécial “Sport et Statistique”

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Nowadays, assessing athletic performances with statistics tools received a lot of attention. Not long ago, this attitude was restricted to USA. Since about ten years, it has been extended to many other countries as France. This success story can be illustrated with many examples and I just mention the survey “L’équipe explore” *La Data révolution* (Delfosse, 2014) published by the sport journal *L’équipe* which analyze the deep influence of Data Analysis to understand and improve the soccer team performances. (I thank Charles Bouveyron who indicates to me this web survey.) Thus, describing and commenting statistical data in popular newspapers and broadcasts is now common. Moreover, there is an increasing number of articles concerned with sport in academic statistical journals as *Journal of the American Statistical Association* and the academic Journal *Journal of Quantitative Analysis in Sports* devoted to sport publishes a lot of papers involved in statistical analysis. Thus athletic data bases are became an interesting area to use and assess new statistical methods and models. (See for instance Komar et al. 2014 who design a clustering of swimmer data with a regularized mixture model.)

This success of statistical data analysis in sport had encouraged Jean-Louis Foulley to organize a half-day meeting on "Sport and Statistics" with the SFdS. The present special issue arises from this meeting. It includes four articles which are essentially aiming to propose relevant statistical methods to get useful informations from data on sport.

The article "Around the ranking process : examples of tennis, table tennis and golf" by Loïc Champagne and Léo Gerville-Réache provides a way to get a fair ranking in individual sports by using simple probabilistic models estimated with observed frequencies. The proposed approach takes into account the specific features of the concerned sports.

The article "Informative prior distributions for a binomial model to predict professional tennis results" by Pierre Colin and Aurélien Bechler proposes an informative Bayesian approach for prediction taking profit of the past data. This approach makes a smart difference between the prior information on the mean and the variance of the prior distributions.

The article "A simple Bayesian procedure for forecasting the outcomes of the UEFA champion League matches" by Jean-Louis Foulley proposes an efficient use of the annual update of team rankings.

The article "Towards an objective team efficiency rate in basketball" by Gilles Celeux and Valérie Robert proposes team and players efficiency rates taking the match results into account in basketball.

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Thus, all the articles propose new ranking or predictions rates based on simple statistical procedures from precise and open data bases.

I thank all the authors for their contributions and Jean-Louis Foulley for his leadership activity for a statistical use of sport data. This special issue is a direct product of his activity.

Références

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Komar, J., Herault, R., and Seifert, L. (2014). Key point selection and clustering of swimmer coordination through sparse Fisher-EM. <http://arxiv.org/pdf/1401.1489v1.pdf>.