



## Editorial: *Journal of Classification* Vol. 37-2

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The second issue for 2020 comes at time when the *Journal of Classification* welcomes its fourth Editor-in-Chief since the foundation of the journal in 1984. To mark the transition, it is fitting that this editorial is co-authored by the former (Steinley) and new (McNicholas) Editors-in-Chief. McNicholas is grateful to Steinley for his efforts over the past few years and his advice during the transition. Steinley wishes McNicholas all the best for the years ahead.

This issue contains a total of fourteen articles, the first of which, by Sheikh and Coolen, discusses a framework for Bayesian classification where cross-validation is not required for the estimation of hyperparameters. Two specific models are discussed, one of which is novel. These models are shown to perform well when compared with state-of-the-art Bayesian approaches that take a more typical approach vis-a-vis hyperparameter estimation, i.e., via cross-validation. The second paper, by Ouyang and Song, also expounds on some of the computational aspects of Bayesian statistics. This time, the focus is on an interesting use of P-splines. The third paper is by Calamai and presents some theoretical results on positive-weighted trees. In the fourth article, Zhan, Wang and Li develop a latent structural model (LSM) for polytomous attributes. A Markov chain Monte Carlo approach is used for parameter estimation and this LSM—which is a partial mastery, higher-order LSM—is applied to an interesting dataset that contains three polytomous attributes. In the fifth paper, Rezaei introduces an approach for combining two centroid-based clusterings with the goal of reducing clustering error.

In the sixth paper, Murray, Browne and McNicholas extend the well-known mixture of factor analyzers model to non-Gaussian components via the hidden truncation hyperbolic distribution. The mixture of hidden truncation hyperbolic factor analyzers model is developed and applied for clustering as well as semi-supervised classification. In the seventh paper, Landaluce-Calvo and Modroño-Herrán develop a non-parametric approach for time series classification. This approach, which makes use of multiple factor analysis and ascending hierarchical classification analysis, is illustrated using data on weekly stock prices for fifteen Spanish retail banks. The next article, by Santos, de la Torre and von Davier, con-

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siders cognitive diagnosis modelling. In particular, an approach for person fit analysis is considered where an adjustment is necessary to account for the negative null distribution of the standardized log-likelihood statistic. Data on responses of middle school students to fraction-subtraction items are used for illustration.

The ninth paper of this issue, by Zollanvari, James and Sameni, considers the peaking phenomenon in the context of linear discriminant analysis. This is a very interesting study because the results enrich the conventional understanding of the peaking phenomenon. The tenth paper is by O'Brien, Lawson, Schweppe, Bahjat and Qaqish. This work is, *inter alia*, a valuable contribution to the literature on the interpretation of clustering results. Besides a fascinating discourse, some practical tools are introduced and illustrated on two real datasets. In the eleventh article, Yu, Zhong and Kim introduce a feature selection algorithm for use in clustering. This approach, which is based on feature ranking, is illustrated on several datasets. The twelfth article, by Ferrer-Sapena, Calabuig, García Raffi and Sánchez Pérez, addresses the delicate subject of where one should submit a manuscript for publication. In the thirteenth paper, Yamashita and Adachi present a modification of  $k$ -means clustering that leads to an easily-interpretable centroid matrix. The final paper in this issue, by Ingrassia and Punzo, discusses the important topic of cluster validation in the context of mixtures of regressions. This approach, which is based on a decomposition of the total sum of squares, is illustrated on simulated and real data.

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