

Editorial

Andreas Geyer-Schulz and Józef Pociecha

The first volume of Archives of Data Science, Series A is a special issue of a selection of contributions which have been originally presented at the *3rd Bilateral German-Polish Symposium on Data Analysis and Its Applications* (GPSDAA 2013). The GPSDAA is a joint workshop of the Gesellschaft für Klassifikation e.V. (GfKl) and the Sekcja Klasyfikacji i Analizy Danych (SKAD) and its third incarnation was hosted by Hermann Locarek-Junge at the TU Dresden from September 26th-28th, 2013.

The workshop contained 22 presentations of joint work in progress in data science the following researchers:

Werner Adler, Daniel Baier, Fabian Ball, Tomasz Bartłomowicz, Andrzej Bąk, Andreas Beyer, Hans-Hermann Bock, Robert Busa-Fekete, Sabina Denkowska, Józef Dziechciarz, Manuel Ferreira, Andreas Geyer-Schulz, Thomas Górecki, Swetlana Herbrandt, Eyke Hüllermeier, Hans A. Kestler, Zardad Khan, Anna Król, Michael Kuhn, Katarzyna Kuziak, Berthold Lausen, Ludwig Lausser, Paweł Lula, Hans-Joachim Mucha, Jan Mutl, Jan W. Owsiański, Barbara

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Pawełek, Marcin Pełka, Krzysztof Piontek, Józef Pociecha, Sergej Potapov, Nils Raabe, Christian Rautert, Aneta Rybicka, Adam Sagan, Stefanie Schreiber, Leopold Sögner, Andrzej Sokołowski, Christoph Stadtfeld, Marta Targaszewska, Claus Weihs, Justyna Wilk, and Waldemar Wołyński.

The nine papers in this volume are all revised and considerably extended versions of the presentations given at the GPSDAA 2013. We thank all authors for the considerable additional effort and time they have put into the improvement of their papers and, last but not least, for their patience with the delays in the publication process.

On Friday, September 27th, 2013 a roundtable on the *Future of Scientific Publishing* was held which led to vivid discussions among the workshop participants. In a way these discussions were also crucial for the creation of the Archives of Data Science, Series A.

This issue is structured by topics:

Clustering: Hans-Hermann Bock contributes a survey paper on probabilistic two-way clustering and Hans-Joachim Mucha a paper on the problem of assessing cluster stability.

Machine Learning: Michael Bräuning and Eyke Hüllermeier present new algorithms for learning conditional lexicographic preference trees and Justyna Wilk shows an application of classification trees to demographic research.

Conjoint Analysis: Daniel Baier, Marcin Pełka, Aneta Rybicka and Stefanie Schreiber compare traditional and choice-base conjoint analysis models when both models are estimated by hierarchical Bayes algorithms and Tomasz Bartłomowicz, Andrzej Bąk present the MaxDiff R-package.

Applications: The last group of papers covers three different areas of applications of data science methods:

- Józef Dziechciarz, Anna Król, Marta Targaszewska present a variety of approaches of measuring the effectiveness of tertiary education.
- Claus Weihs, Svetlana Herbrandt, Nils Raabe, Manuel Ferreira, Christian Rautert combine laboratory experiments, statistical modelling techniques and finite element methods in their approach to simulate grinding processes with diamond tools.
- Ludwig Lausser, Florian Schmid, Matthias Platzer, Mikko J. Sillanpää, and Hans A. Kestler apply classifiers to develop diagnostic tools for gene expression data which bridge the gap to higher-level explanations such as molecular signaling pathways.