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Guest Editorial
Advances in Databases and Information Systems

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This special section includes the best papers from the workshops co-located with the 23rd European Conference on Advances in Databases and Information Systems - ADBIS (http://adbis.eu), which was held in Slovenia in 2019. From the top 10 papers invited to this special issue, 3 were accepted and are included in this volume. These papers report extended research w.r.t. the original ADBIS Workshop papers. They cover the following tree topics: (1) process discovery, (2) crowd counting , and (3) user preference modeling.

The first paper entitled *Improving the Performance of Process Discovery Algorithms by Instance Selection* is contributed by Mohammadreza Fani Sani, Sebastiaan J. van Zelst, and Wil van der Aalst. The paper addresses the problem of increasing performance of a process discovery algorithm. Such an algorithm automatically discovers process models by analyzing events generated during the execution of the algorithm. The events are stored in a log. Process discovery is a complex, time consuming task, thus reducing its execution time is one of the challenges. One approach to reducing the execution time is to reduce the volume of events that need to be analyzed by the algorithm. In this paper the authors analyzed 7 alternative biased sampling methods and experimentally assessed their impact on increasing the algorithm scalability on various event logs.

The second paper entitled *Crowd counting a la Bourdieu, Automated estimation of the number of people*, is contributed by Karolina Przybylek and Illia Shkroba. Recently the problem of crowd counting is emergent in different situations. Crowd counting is important in public safety (like crushing between people, risk of spreading infectious disease), politics (like protest organisation) journalism (like accuracy of the estimation of the ground truth supporting an article) and other areas. The paper investigated models for crowd counting that are inspired by the observations of famous sociologist Pierre Bourdieu. Authors in their experiments achieved very competitive result suitable for low computational power and energy efficient architectures.

The third paper entitled *Visual E-Commerce Values Filtering Framework with Spatial Database Metric* is contributed by Michal Kopecky and Peter Vojtáš. Recommender systems have been subject to intensive studies in the past decade, in particular in the context of e-commerce. A core component of such systems is the modeling of user preferences. This paper starts from the Fagin-Lotem-Naor model for preference modeling and combines it with the challenge-response framework for the translation of models into programs and, to make the models more intuitive, with spatial database features. This allows on one hand to visualize the models and on the other hand to define new metrics.