

# Editorial Acknowledgment and Introduction to the Special Issue of the EDM Journal Track

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## INTRODUCTION

The 15<sup>th</sup> International Conference on Educational Data Mining (EDM 2022) was held from July 24<sup>th</sup> to July 27<sup>th</sup> in Durham (UK). Educational Data Mining is a leading international forum for high-quality research that mines datasets to answer educational research questions, including exploring how people learn and how they teach. The overarching goal of the Educational Data Mining research community is to support learners and teachers more effectively, by developing data-driven understanding of the learning and teaching processes in a wide variety of contexts and diverse learners.

For the eight time, EDM 2022 held a Journal track allowing papers submitted to JEDM to be presented at the conference. The full texts for these papers are included in this Special Issue of the Journal of Educational Data Mining (JEDM).

The JEDM Track at EDM 2022 received 5 submissions, among which 2 made it to the final stage in time for publication. We are pleased to publish the following works in this issue.

In the first paper, **Matsuda, Wood, Shrivastava, Shimmei, & Bier**, propose an approach to mine latent skills from assessment items included in existing courseware, provide the discovered skills with human-friendly labels, and map didactic paragraph texts with skills. They call the technology, SMART (Skill Model mining with Automated detection of Resemblance among Texts). The authors applied SMART and evaluated the accuracy of students' learning prediction. This paper also discusses the practical challenges of adaptive instruction for large-scale online courses and the impact of leveraging machine and human annotated labels.

In the second paper, **Sarsa, Leinonen, & Hellas**, present a review of the state of the art of Deep Learning Knowledge Tracing (DLKT) approaches. They review and evaluate six DLKT approaches by comparing their performance against each other and against five baselines on seven datasets collected in various context. In addition, they investigate the impact of hyperparameter tuning and the selection of performance metric may impact the performance of DLKT model. Through their paper they also discuss the issue of replicability when comparing the performance of data-driven methods such as DLKT.