



Special Issue on Selected Papers from ICADL 2020

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This special issue of International Journal on Digital Libraries (IJDL) brings together a selection of high-quality papers that were presented at the 22nd International Conference on Asia–Pacific Digital Libraries (ICADL 2020) including also the best paper award winner and the runner up paper. ICADL is an annual international interdisciplinary conference that, together with JCDL and TPDL conference, is one of the three top venues for connecting digital library, computer science and library as well as information science communities.

The 22nd International Conference on Asia–Pacific Digital Libraries was held online from November 30 to December 1, 2020. ICADL 2020 was planned as a forum for researchers to exchange ideas and discuss together across domains for an innovative digital information environment especially during a time of pandemic, upheavals in work, culture, health services and so on. The theme of the conference was: Digital Libraries at Times of Massive Societal Transition—Collaborating and Connecting Community during Global Change.

As best papers, the articles in this special issue of IJDL have gone through a rigorous review process. The top highly evaluated and scored papers at ICADL2020 were first selected and then invited to be published at the special issue after their extension. They were then peer-reviewed by three experts to help the authors make substantive changes for improving their work. The papers were then again evaluated to check if they have addressed the feedback from the IJDL reviewers. The five papers contained in this special issue that emerged from our editorial process are as follows:

Our first paper, “SchenQL: In-Depth Analysis of a Query Language for Bibliographic Metadata” by Christin Katharina Kreutz, Michael Wolz, Jascha Knack, Benjamin Weyers

and Ralf Schenkel presents and evaluates SchenQL, a simple query language for bibliographic metadata. Typical interfaces of digital libraries provide keyword search on metadata that does not allow us to directly express more complex queries. This paper gives the design of the language, the implementation of its processor and a prototypical GUI interface. The paper also provides the evaluation results in terms of its performance and usability.

The second paper, “MELHISSA: A Multilingual Entity Linking Architecture for Historical Press Articles” by Elvys Linhares Pontes, Luis Adrián Cabrera-Diego, Jose G. Moreno, Emanuela Boros, Ahmed Hamdi, Antoine Doucet, Nicolas Sidere and Mickaël Coustaty develops a multilingual entity linking architecture for historical newspaper articles including multilingual analysis, OCR correction, and filter analysis. Indexing historical documents is sometimes challenging due to certain characteristics of this task. The entity linking contributes to obtaining textual data for digital libraries or archives. The authors use for experiments two historical datasets covering five European languages (English, Finnish, French, German, and Swedish). Their deep analysis with wide-range datasets shows that MELHISSA is promising.

In “CNN-based Framework for Classifying Temporal Relations with Question Encoder”, Yohei Seki, Kangkang Zhao, Masaki Oguni and Kazunari Sugiyama propose a novel framework for temporal relation classification in text. Temporal-relation classification is a challenging task that can be useful for various NLP downstream applications including constructing timelines or improving fact-checking techniques. However, the shortcoming of the current approaches to temporal relation extraction is the lack of the consideration of task-related information. The framework proposed by the authors incorporates prior information by employing awareness of events and time expressions with various window sizes, and the task-related information is extracted solely from sentence embeddings. The experimental results on Timebank-Dense corpus demonstrate that the proposed approach outperforms CNN-, LSTM-, and BERT-based temporal relation classifiers among other approaches.

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The paper, “Cross-Lingual Citations in English Papers: A Large-Scale Analysis of Prevalence, Usage, and Impact,” by Tarek Saier, Michael Färber and Tornike Tsereteli tackles a pressing issue in citation data and analyses. The paper addresses gaps in cross-lingual citations due to the lack of non-English publications in citation datasets, as well as language metadata. Using a study of over a million English publications across three scientific disciplines and three decades, the authors discuss evidence of cross-lingual citations as well as their impacts. Other than demonstrating the presence of cross-lingual scholarly communication, the paper is also important in facilitating and inspiring further research in this under-researched area by making available their source data and codes.

The paper, “Evaluating BERT-based Scientific Relation Classifiers for Scholarly Knowledge Graph Construction on Digital Library Collections” by Ming Jiang, Jennifer D’Souza, Sören Auer and J. Stephen Downie presents an empirical evaluation of eight BERT-based scientific rela-

tion classification models for improving scholarly knowledge representations in digital libraries. Considering the scientific publication deluge in digital libraries, it is still challenging for researchers to obtain comprehensive, fine-grained and context-sensitive scholarly knowledge for their research. This study explores the impact of BERT model variants and classification strategies and offers recommendations to the stakeholders of digital libraries for selecting the appropriate technique to build knowledge-graph-based systems for enhanced scholarly information organization.

The five articles that have gone through the editorial process for this special issue of IJDL represent a broad spectrum of high-quality work in our communities. We hope that the readers will find these papers as interesting and insightful as we did.

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