



Preface to the special issue on the Asia Pacific Web (APWeb) and Web-Age Information Management (WAIM) Joint International Conference on Web and Big Data (APWeb-WAIM) 2021

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The goal of this special issue is to highlight recent top-level contributions addressing developments in the field of Big Data research on the Web and Web-Age Information Management.

In this special issue on APWeb-WAIM 2021, we have selected four extraordinary papers. The first contribution by Zeting Li, Yi Cai, Xingwei Tan, Guoqiang Han, Hao-peng Ren, Xin Wu, and Wen Li introduces Learning Refined Features for Open-World Text Classification with Class Description and Commonsense Knowledge. Motivated by the theory of psychology and cognitive science, the authors utilize class descriptions summarized by human to refine discriminant features and propose a regularization with class descriptions. The regularization is then incorporated into DOC (one of state-of-the-art models) to improve the performance of open-world classification. Next, the paper on Accelerating Regular Path Queries on Knowledge Graphs by Van-Quyet Nguyen, Van-Hau Nguyen, Huy-The Vu, Minh-Quy Nguyen, Quyet-Thang Huynh, and Kyungbaek Kim presents a novel approach of to reduce the parallel evaluation cost by estimating the searching cost of Regular Path Queries (RPQs). Therefore, the authors introduce a method that estimates the result size of the subqueries. In What Have We Learned from OpenReview? Gang Wang, Qi Peng, Yanfeng Zhang, and Mingyang Zhan discuss aspects of peer review process including, but not limited to (meta) reviews, rebuttals, and final decisions that are all released to public. Here, they identify various findings that might help to understand the effectiveness of the public-accessible double-blind peer review process. Last, but not least, the paper by Wei Zhuo, Kunchi Liu, Taofeng Xue, Beihong Jin, Beibei Li, Xinzhou Dong,

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He Chen, Wenhai Pan, Xuejian Zhang, and Shuo Zhou introduces a Graph Convolutional Network for Difficulty-controllable Visual Question Generation. To this end, the authors study the Interactions between users and videos as a major data source of performing video recommendation. For that purpose, they propose a graph convolutional neural network to capture the influence between users and videos by weighting and fusing the semantics of user behaviors into the embeddings of users and videos.

The papers presented in this edition of the World Wide Web Journal are a special issue of the best papers presented at the Asia Pacific Web (APWeb) and Web-Age Information Management (WAIM) Joint International Conference on Web and Big Data (APWeb-WAIM) 2021. To this end, we selected the best reviewed as well as the best presented papers from the aforementioned conferences. To this, we asked these authors to submit a substantially extended version of their initial conference submission, which underwent again a strict reviewing. As a result, we have selected four high caliber contributions presented in this special issue.

In summary, this special issue covers a wide spectrum of highly relevant and timely topics ranging from “low-level” content processing of text and video classification up to “higher-level” semantics incorporating artificial intelligence and knowledge graphs. We hope these papers, will motivate you to look into the various facets Big Data and Web research.

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