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Forewords

The 29th Conference on Computational Linguistics and Speech Processing (ROCLING 2017) was held at Nangang Exhibition Center, Taipei, Taiwan on Nov. 27-28, 2017. ROCLING, which sponsored by the Association for Computational Linguistics and Chinese Language Processing (ACLCLP), is the leading and most comprehensive conference on computational linguistics and speech processing in Taiwan, bringing together researchers, scientists and industry participants from fields of computational linguistics, information understanding, and speech processing, to present their work and discuss recent trends in the field. This special issue presents the extended and reviewed versions of seven papers meticulously selected from ROCLING 2017, including 3 natural language processing papers and 4 speech processing papers.

The first paper presents a neural relevance-aware model (NRM) for spoken document retrieval (SDR). The notion of query intent classification is incorporated into the proposed NRM modeling framework to obtain more sophisticated query representations. This paper is awarded as one of two best papers of ROCLING 2017. The second paper discusses the question retrieval problem for community-based question answering (CQA). This paper proposes a retrieval approach using word embedding learning and participant reputation ranking in the community. The third paper from National Taiwan Normal University focuses on the text readability classification problem. This paper proposes two novel readability models built on top of a convolutional neural network based representation and the so-called fast text representation, respectively. The fourth paper discusses the acoustic echo cancellation problem. This paper presents an improved vector-space-based adaptive filtering algorithm to achieve fast converge and a better echo return loss enhancement performance. This paper is also awarded as one of two best papers of ROCLING 2017. The fifth paper focuses on the replay spoofing detection problem to tell whether the given utterance comes directly from the mouth of a speaker or indirectly through a playback. This paper presents a discriminative autoencoder (DcAE) neural network model which achieves up to 42% relative improvement in the equal error rate (EER) over the official baseline. The sixth paper discusses the tone group parser issue for Taiwanese text-to-speech. This paper presents a hypothesis of tonal government arguing that if the allotone selection can be made for each word in a sentence then the tone groups will be separated within the sentence. The last paper from National Tsing Hua University focuses on the speech emotion recognition problem. The approach proposed in this paper achieves improvements based on a set of trajectory-based spatial-temporal spectral features.

The Guest Editors of this special issue would like to thank all of the authors and reviewers for sharing their knowledge and experience at the conference. We hope this issue provide for directing and inspiring new pathways of NLP and spoken language research within the research field.

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