

## Special Issue on Advancing Big Data in Speech Computation

# CALL FOR PAPERS

Big Data is an emerging topic in a broad variety of research areas, with the promise to allow predictive user behavior analytics for a wide variety of speech patterns like emotions, sentiment, personality, and pathology. With the emerging voice assistants, such as Amazon Alexa or Google Assistant, speech interaction has attracted increasing attention. In addition, further speech-based HCI-systems could benefit from big data computation, such as Speech-to-Speech translation systems, conversational agents, and educational systems.

Unfortunately, when dealing with speech computation tasks, often only comparably small amounts of data are available, or the collection is cumbersome. Thus, advanced methods such as transfer learning, active learning, data synthesis, and (semi-) automatic annotation methods or domain-/topic-adaptation are needed.

This special issue welcomes original research papers concerned with the big data exploitation of speech data, particularly in HCI-related contexts. We encourage researchers to submit review articles describing the current state of the art in speech-based big-data analyses. Submissions dealing with data synthesis or recordings and automatic annotation of large sets of speech data are highly encouraged.

Potential topics include but are not limited to the following:

- ▶ Speech data transfer learning and active learning for HCI systems
- ▶ (Semi-) Automatic speech data analyses for HCI systems
- ▶ Big data language modeling for HCI systems
- ▶ Generative adversarial networks for speech-based HCI behavior analytics
- ▶ Methods review for big data in advancing speech-based HCI
- ▶ Comparison of big data and small data approaches for speech-based HCI
- ▶ Application of Big data methods for speech based HCI-systems

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ahci/abd/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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### Submission Deadline

Friday, 31 May 2019

### Publication Date

October 2019