

## Call for Papers

IEEE Transactions on Multimedia Special Issue on Hybrid Human-Artificial

Intelligence for Multimedia Computing

### SUMMARY

Multimedia Computing represents high-level information abstraction from complicated multimedia components, including video detection and object recognition, speech translation, and analysis, as well as multi-modal data processing and computing. It serves as mainstream for information retrieval due to the large-scale spread of various portable and mobile devices and objects. However, the considerable volumes of data and resources, the increasing complexity of data structures, and the amazing data modalities all challenge traditional multimedia computing algorithms. In particular, with the emerging trend of Hybrid Human-Artificial Intelligence (H-AI), multimedia data are becoming much more complex with the fusion of human and machine signals. H-AI is a high-level advanced intelligence, which combines benefits from both human intelligence and AI, and it provides a new perspective for dealing with multimedia in a more intelligent way. Traditional multimedia computing algorithms are poor at processing cross-media data, like semantic association, inference, and generalization, while humans are good at it with intrinsic and inherent nature. Besides, humans use multimedia to communicate, interact and provide services and H-AI may be a new direction for dealing with challenging conditions. H-AI techniques could offer better opportunities for information retrieval and achieve a technical breakthrough by exploiting human intelligence. At the same time, the research boom in multimedia computing can in turn prompt the development of H-AI.

This special issue aims to provide a much needed research forum for sharing new ideas related to H-AI for Multimedia Computing. We firmly believe that this is a rich area that will attract considerable attention from both industry and academia in the coming years. This special issue aims to 1) Draw the attention of scholars and researchers on technical innovation relating to multimedia computing with H-AI; 2) Provide a more intelligent opportunity to exchange ideas and visions with regard to multimedia computing; 3) Inspire and stimulate the promotion of H-AI and multimedia computing. We expect to promote applications of H-AI for Multimedia Computing and achieve mutual development for H-AI and multimedia computing.

### SCOPE

For this Special Issue of the IEEE Transactions on Multimedia, we seek articles that include innovative concepts, novel techniques, and new applications. Specific topics include but are not limited to the following:

- Novel theories, concepts, and models of H-AI for Multimedia Computing.
- Intelligent processing architectures for large-scale and multi-model multimedia data.
- Evaluation criteria for the performance of H-AI techniques for Multimedia Computing.

- Popular techniques and applications of H-AI for Multimedia Computing.
- Challenges which need to be overcome in multimedia computing with H-AI.
- Security and privacy problems in multimedia computing with H-AI.

## IMPORTANT DATES

Paper submission deadline: Oct 31, 2020      First-round review completed: Dec 15, 2020

Revision Due: Feb 15, 2021      Second-round review completed: Mar 15, 2021

Final manuscript due: Apr 30, 2021      Publication data: Late 2021

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## SUBMISSION PROCEDURE

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