Call For Papers
IEEE Transactions on Multimedia
Special Issue on Deep Learning for Multimedia Computing

Summary: Conventional multimedia computing is often built on top of handcrafted features, which are often much restrictive in capturing complex multimedia content such as images, audios, text and user-generated data with domain-specific knowledge. Recent progress on deep learning opens an exciting new era, placing multimedia computing on a more rigorous foundation with automatically learned representations to model the multimodal data and the cross-media interactions. Existing studies have revealed promising results that have greatly advanced the state-of-the-art performance in a series of multimedia research areas, from the multimedia content analysis, to modeling the interactions between multimodal data, to multimedia content recommendation systems, to name a few here.

This special issue aims at providing a forum to present recent advancements in deep learning research that directly concerns the multimedia community. Specifically, deep learning has successfully designed algorithms that can build deep nonlinear representations to mimic how the brain perceives and understands multimodal information, ranging from low-level signals like images and audios, to high-level semantic data like natural language. For multimedia research, it is especially important to develop deep networks to capture the dependencies between different genres of data, building joint deep representation for diverse modalities.

Scope:
The topics of interest include but are not limited to
1. Novel deep network architectures for multimodal data
2. Efficient training and inference methods for multimedia deep networks
3. Emerging applications of deep learning in multimedia search, retrieval and management
4. Deep learning for multimedia content analysis and recommendation
5. Deep learning for cross-media analysis, knowledge transfer and information sharing
6. Distributed computing, GPUs and new hardware for deep learning in multimedia research
7. Other deep learning topics for multimedia computing, involving at least two modalities

Submission guideline:
Prospective authors should submit original manuscripts that have not appeared, nor are under consideration, in any other journals. Prospective authors are required to strictly follow the Author's Guide for manuscript submission to the IEEE Transactions on Multimedia (TMM) at http://www.signalprocessingsociety.org/tmm/tmm-author-info/, and manuscripts should be submitted electronically through the online IEEE manuscript submission portal at http://mc.manuscriptcentral.com/tmm-ieee.

Important Dates
Paper submission due: April 20, 2015 (extended)
First-round review completed: June 1, 2015
Revision Due: July 1, 2015
Second-round review completed: August 1, 2015
Final manuscript due: September 1, 2015
Publication date: November/December 2015

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