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IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY
Special Issue on Visual Computing in the Cloud: Fundamentals and Applications
Part of Visual Computing in the Cloud Special Issue Series

Cloud computing involves a large number of terminals connected through a real-time high-speed network (such as the Internet). The adoption rates for private and hybrid cloud services have increased to 40% in 2013, with computing shifting from on-premise infrastructure to the cloud. To keep pace with the ever-accelerating rate of innovation, companies are moving to the cloud. However, visual computing in the cloud brings great challenges, such as how to measure and then improve quality of experience in cloud computing. This special issue will provide the image/video community a forum present new academic research and industrial development in running visual computing services in the cloud. The special issue aims to address fundamental and practical aspects of visual computing in the cloud, such as: how to build cloud platforms that can cope with seemingly unlimited supply of content coming from traditional media sources as well as new media uploaded to the Internet (YouTube, Facebook, etc.), how to leverage cloud technology to build high quality image/video browsing and delivery experiences for a global audience, how to ingest, encode, process, adapt, as well as protect contents and privacy of users, how to provide both on-demand and live streaming capabilities, how to tag image/video and allow consumers to access the image/video contents with high availability, how to support image/video services in mobile devices, how to perform real-time image/video analytics in the cloud, to mention a few among a diverse range of challenges.

Potential topics of interest include, but are not limited to:

- Architecture of cloud image/video platform
- Cloud-based image/video ingestion, encoding, processing, format conversion, content protection
- Trust and security in visual computing on the cloud
- On-demand, live, P2P image/video distribution in the cloud
- Scalable coding and transcoding in image/video delivery
- Adaptive video streaming
- Performance measurement and diagnosis
- WebRTC and low-latency interactive video
- Text and content based image/video search
- Image/video tagging and recommendation in the cloud
- Cloud-enhanced mobile media applications and platform
- Social-aware visual computing in the cloud
- Cloud-enhanced 3D, immersive, and augmented reality applications
- Big data processing and analytics of image/video in the cloud
- Distributed, client/cloud image/video applications for the above

Important Dates

Initial Paper Submission:	September 15, 2014
Initial Paper Decision:	December 15, 2014
Revised Paper Submission:	January 15, 2015
Revised Paper Decision:	March 1, 2015
Publication Date:	June 2015

Manuscript submissions and reviewing process

Submission of a paper to CSVT is permitted only if the paper has not been submitted, accepted, published, or copyrighted in another journal. Papers that have been published in conference and workshop proceedings may be submitted for consideration to CSVT provided that (i) the authors cite their earlier work; (ii) the papers are not identical; and (iii) the journal publication includes novel elements (*e.g.*, more

comprehensive experiments). For submission information, please consult the IEEE CSVT Information for Authors: http://tcsvt.polito.it/authors.html.

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