Geneva, 5 July 2019

Ref:	**CL-19/28** **TSB/AM**	- To Administrations of ITU Member States; - To ITU Sector Members, Associates, Academia and relevant international, regional and national organizations

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Subject: **Call for papers - ITU Journal: *ICT Discoveries* special issue on "The future of video and immersive media"**

Dear Sir/Madam,

1   As part of the scholarly, professional ITU Journal: *ICT Discoveries*, which was established in order to encourage the participation of universities and research institutions in the work of the ITU, I am pleased to inform you about the launch of the call for papers for the new special issue titled "The future of video and immersive media". The full text can be found in **Annex 1**. Original paper submissions are invited by **11 November 2019**.

2   The ITU Journal matches research on technical innovation in information and communication technologies (ICTs) with an analysis of the transformations in business, society and governance in the digital era. The ITU Journal also promotes the critical role that ICTs will play in the pursuit of the United Nation's Sustainable Development Goals for 2030. As a peer-reviewed, digital publication, free of charge for both authors and readers, the ITU Journal will help industry players and policy makers prepare for the major breakthroughs in research.

3   Submissions are open to all ITU Member States, Sector Members, Associates and Academic Institutions and to any individual from a country which is a member of ITU who wishes to contribute to the work. This includes individuals who are also members of international, regional and national organizations.

4   At the ITU Plenipotentiary Conference in Dubai, 2018, ITU Members resolved to support the development of the ITU Journal and to publish original scientific research with the aim of generating forward-thinking discussions on emerging trends relevant to the work of the ITU. Members further resolved to establish collaborative efforts with the research community and to raise awareness of the ITU Journal worldwide (Resolution 207 (Dubai, 2018)).

5   In line with the recent Resolution, we encourage all ITU members to promote the call for papers within the academic community of their countries. This call for papers is also available on the ITU website at https://www.itu.int/en/journal/2020/001/Pages/default.aspx.

6   Past issues, as well as detailed information concerning the ITU Journal: *ICT Discoveries*, can be found at https://www.itu.int/en/journal/Pages/default.aspx.

Yours sincerely,

[signed]

Houlin Zhao
Secretary-General

ANNEX 1
(to CL-19/28)

ITU Journal: *ICT Discoveries*

The ITU Journal: *ICT Discoveries* publishes original research on ICT technical developments and their policy and regulatory, economic, social and legal dimensions. It builds bridges between disciplines, connects theory with application, and stimulates international dialogue. This interdisciplinary approach reflects ITU's comprehensive field of interest and explores the convergence of ICT with other disciplines. It also features review articles, best practice implementation tutorials and case studies. The ITU Journal welcomes submissions at any time, on any topic within its scope.

Special issue
The future of video and immersive media
Call for papers

Digital technology continues to transform the media landscape. Advances in multimedia have changed our world, revolutionizing entertainment, connecting friends and families around the globe, enriching our communications experiences and enabling major improvements in medical care and education.

We continue to see huge leaps forward in multimedia compression and streaming delivery together with increases in quality and storage capability. Multimedia is becoming more adaptive to available bandwidth, and innovations in fields such as virtual and augmented reality, video gaming and holographic video promise to deliver highly immersive new media experiences.

But what further new technologies are emerging? How will we store and analyze the vast quantity of video that will be generated? What other forms of media will we be using besides single-camera captured video and associated audio? How will we begin to use augmented reality in our everyday lives? Will increasing dependence on new media affect our ability to discern reality from fiction? How will we verify digital integrity to counteract the threat of manipulated content? And how should we think about data governance and privacy in a world almost entirely mirrored by the digital sphere?

This special issue of the ITU Journal invites original research into the state of the art in multimedia as well as the new possibilities and associated challenges appearing on the horizon.

Suggested topics (but not limited to):

Multimedia infrastructure	• Real-time low-latency systems
	• Storage management
	• Content caching and media tiering
	• Multimedia retrieval and streaming
Signal processing	• Multimedia coding, retargeting and transmission
	• Video coding and compression
Networks and communication	• Multimedia communication, networking and mobility
	• Adaptive streaming
	• Quality of service
	• Wireless and mobile multimedia network management
	• Mobile multimedia network traffic engineering and optimization
	• Multicast and broadcast multimedia service management
	• Media streaming in wireless ad-hoc networks

	• Media streaming in limited bandwidth or intermittent network environments
Protocols and architectures	• Internet technologies • Standard interfaces • Architectures, protocols, and algorithms for multimedia mobility • Multimedia content delivery networks • Multimedia and P2P
Security and privacy	• Multimedia security (watermarking, encryption, etc.), protection of user-generated content and forensics • Digital integrity • Authentication and access control • Content protection and digital rights management • Trusted computing
Human computer interaction (HCI)	• Social computing • Pervasive and ubiquitous computing • User interface software and technology • Human robot interaction • Human machine systems • Multimodal interfaces • Haptics • Intelligent user interfaces
Content analysis	• Multimedia databases, digital libraries, and social media data mining and analysis, big data, data engineering • Knowledge discovery • Web search • Intelligent systems and technology • Recommendation systems • Social network analysis and mining • Sentiment and social media analysis • Computational social science • Multimedia ontologies and conceptual clustering • Multimedia patter recognition and analysis
Applications and services	• Multimedia and social sciences, art, entertainment, culture, education • Multimedia in medicine and healthcare, automation in surgery • Remote monitoring and surveillance • Smart cars, mobile and ubiquitous multimedia in intelligent transportation systems • Smart homes • Pervasive and interactive multimedia systems (digital TV, mobile systems, gaming, virtual/augmented/mixed reality, alternate reality, 3D imaging, visualization, animation, immersive systems, 3DTV, digital holography) • Smart wearable technologies • Video game streaming technologies
Social impact	• Deep fakes, manipulated content, misinformation, biases • Countermeasures for dealing with fake content • Security, privacy and trust • Fairness, accountability, transparency and ethics • Inclusive media, affordability and equal access • Accessibility and usability

	• Data management and ownership • Digital rights and identity management • Social uses and impacts of media • User perception and behaviour • Public participation • Social contagion, social sensing • Opinion dynamics, collective actions, diffusion of information • Misperceptions, beliefs, metacognition, trust in media, credibility of digital information • Psychology • Political communication, sociology, public policy, governance, democracy

Keywords

Media; multimedia; virtual, augmented, and alternate reality; video; digital holography; machine learning; performance; QoS and QoE; social media; data management; data encryption; data collection; data ownership; manipulated content; fake news; security and trust.

Deadlines

Paper submission: **11 November 2019**
Paper acceptance notification: 20 January 2020
Camera-ready submission: 17 February 2020

Paper submission

This special issue calls for original scientific papers. Submitted papers should not be under consideration for publication elsewhere. Submissions must be made electronically using EDAS: Editor's Assistant. Templates and guidelines can be found at: https://www.itu.int/en/journal/Pages/submission-guidelines.aspx.

Publication

As soon as they are accepted, papers will be continuously published on the ITU digital library. They will then be bundled into the yearly volume.

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Additional information

Please visit the ITU Journal website at: https://www.itu.int/en/journal/2020/001/Pages/default.aspx.
Inquiries should be addressed to Alessia Magliarditi at: journal@itu.int

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