

# الأمانة العامة (GS)

# جنيف، 11 نوفمبر 2025

المرجع: CL-25/49

جهة الاتصال: Alessia Magliarditi - الدول الأعضاء في الاتحاد؛

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ذات الصلة

مؤتمر كاليدوسكوب لعام 2026 الذي ينظمه الاتحاد الدولي للاتصالات – الذكاء الاصطناعي والتكنولوجيات الرائدة من أجل المصلحة العامة جنيف، سويسرا (7-10 يوليو 2026)

حضرات السادة والسيدات،

تحية طيبة وبعد،

1 في إطار <u>سلسلة مؤتمرات كاليدوسكوب</u>، يسرني إبلاغكم بالدورة السادسة عشرة للمؤتمر الأكاديمي الرائد الخاضع لاستعراض الأقران والذي ينظمه الاتحاد الدولي للاتصالات (ITU)، والذي سيجمع شخصيات بارزة من الجامعات ودوائر الصناعة ومؤسسات الأبحاث من مختلف أنحاء العالم. وسيوفر المؤتمر منصة فريدة لتبادل الأفكار وإقامة التعاون ومشاركة أحدث الأبحاث واقتراح حلول عملية تجعل التكنولوجيات الرائدة أكثر سهولة وشمولية واستدامة. وسوف تستضيف مؤتمر <u>كاليدوسكوب 2026 -</u> الذكاء الاصطناعي من أجل المصلحة العامة لعام 2026 في جنيف، سويسرا، من 7 إلى 10 يوليو 2026.

2 ويدعو *مؤتمر كاليدوسكوب لعام 2026* إلى تقديم مقترحات بحثية أصلية ومتعددة التخصصات، تستكشف كيفية تفاعل التكنولوجيات الرائدة، بما في ذلك **الذكاء الاصطناعي والسطوح البينية للدماغ-الحاسوب** و**الذكاء الاصطناعي المجسد والقيادة الذاتية وتكنولوجيات المعلومات الجغرافية المكانية والمعلومات الكمومية، مع الاتصالات. ونشجع تقديم المساهمات التي تظهر إمكانات تحويلية، وتساهم في تصميم المعايير الدولية واعتمادها، وتقترح حلولاً مبتكرة قائمة على الأخلاقيات وشاملة عالمياً وجاهزة المستقبل. وتكمل هذه الطبعة من مؤتمرات كاليدوسكوب أيضاً الهيئة الاستشارية الأكاديمية الجديدة التابعة للاتحاد والمعنية بالتكنولوجيات الناشئة، والتي تجمع أبرز الأكاديميين لتحديد الاتجاهات الناشئة وتعزيز الصلة بين الأبحاث والابتكار والسياسات.** 

3 وباب المشاركة مفتوح أمام الدول الأعضاء في الاتحاد وأعضاء القطاعات والمنتسبين والهيئات الأكاديمية وأمام أي شخص من بلد عضو في الاتحاد يرغب في المساهمة في أعمال المؤتمر. ويشمل ذلك الأفراد الأعضاء في المنظمات الدولية والإقليمية والوطنية، وأفرقة البحث والتطوير والمبتكرين في الصناعة؛ والشركات الناشئة التي تعمل عند تقاطع التكنولوجيات الناشئة؛ وخبراء السياسات والمتخصصين في العلوم الاجتماعية.

4 ونشجع جميع أعضاء الاتحاد على الترويج لهذا الحدث في المجتمعات البحثية في بلدانهم، بما في ذلك الجامعات، والمؤسسات الأكاديمية، والبحث والتطوير الصناعي، والشركات الناشئة.

5 وستُتاح معلومات مفصّلة حول التسجيل واللوجستيات في الصفحة الخاصة بهذا الحدث: <u>https://www.itu.int/go/K-</u>. 2026، في وقت أقرب من موعد المؤتمر.

وتفضلوا بقبول فائق التقدير والاحترام.

(التوقيع)

دورين بوغدان-مارتن الأمينة العامة

الملحقات: 1

# **ANNEX**

16<sup>™</sup> ITU ACADEMIC CONFERENCE

# **ITU**KALEIDOSCOPE

**GENEVA2026** 

AI and frontier technologies for good

7-10 July 2026 Geneva, Switzerland





# TUKALEIDOSCOPE GENEVA2026

Kaleidoscope 2026: AI and frontier technologies for good is the sixteenth edition of ITU's flagship peer-reviewed academic conference, bringing together leading voices from universities, industry, and research institutions worldwide. The conference provides a unique platform to exchange ideas, establish collaboration, share cutting-edge research, and propose practical solutions that make frontier technologies more accessible, inclusive, and sustainable.

# **CALL FOR PAPERS**

#### **Theme**

The theme of the fifteenth edition of the ITU Kaleidoscope academic conference captures the ongoing global efforts to harness the power of technology for positive and sustainable change.

The landscape of innovation and digital transformation is evolving at an unprecedented pace, influencing every aspect of our lives, and profoundly impacting global development. As we strive to achieve the SDGs and address pressing societal and environmental concerns, the role of ICTs becomes pivotal.

The conference invites contributions that delve into cutting-edge research, transformative technologies, and innovative practices that underpin the digital revolution with a focus on sustainability and standardization. From the fundamental restructuring of network infrastructures to the applications shaping sustainable development, and the enabling technologies driving these advancements, we seek to explore the multidimensional facets of innovation and digital transformation.

# **Objective**

Kaleidoscope 2026 invites multidisciplinary, original research proposals that explore how frontier technologies, including AI, brain–computer interface, embodied AI, autonomous driving, geospatial and quantum information technologies interface with telecommunications.

We welcome submissions across three major tracks. The first is about the technical innovations themselves. The second is about applications and services built around these innovations. The third concerns the socioeconomic impact of these technologies and services, the policies that should be developed to ensure sustainable development, and the ethical considerations that should guide all the participants. We encourage submissions that demonstrate transformative potential, contribute to the design and adoption of international standards, and propose innovative solutions that are ethically grounded, globally inclusive, and future ready.

# Audience

Professors and academic researchers; students and early career researchers at all levels - from undergraduate to postdoctoral; industry R&D teams and innovators; start-ups working at the intersection of emerging tech; policy experts and social scientists.

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#### Date and venue

7 – 10 July 2026, hosted by the Al for Good Global Summit 2026

# Submission of papers

Kaleidoscope 2026 welcomes submissions of original research papers using the template available on the conference's website. All papers, full and short types, will go through a double-blind peer review process. Selected full papers will be presented in plenary, while selected short papers will be presented in poster sessions. Submissions must be made electronically via EDAS: see <a href="https://www.itu.int/go/K-2026">https://www.itu.int/go/K-2026</a> for more details. Paper proposals will be evaluated according to content, originality, clarity, relevance to the conference's theme and, in particular, significance to future standards and policy.

# Paper types

Full paper (6-8 pages) Short paper (2-4 pages)

#### **Deadlines**

Submission of full paper proposals: 15 December 2025

Notification of paper acceptance: 16 March 2026

Submission of camera-ready accepted papers: 13 April 2026

# **Publication and presentation**

Accepted and presented papers will be published in the Kaleidoscope Proceedings. In addition, extended versions of selected papers might be considered for publication in a special edition of the <a href="ITU Journal on Future">ITU Journal on Future and Evolving Technologies (ITU J-FET)</a>.

# **Awards**

The authors of the three best papers, as selected by the Scientific and Technical Programme Committees, will be honoured with special awards. In addition, young authors of up to 30 years of age presenting accepted papers will receive Young Author Recognition certificates.

# **Keywords**

Artificial intelligence, machine learning, embodied AI, generative AI, robotics, human-computer interaction, quantum computing, quantum networks, quantum sensing, geospatial information, geospatial AI, digital twin earth, metaverse, future mobile and wireless networks, regulation, security and privacy, education

# Suggested (non-exclusive) list of topics

# Track 1

Frontier technological bases in intelligent and resilient network infrastructures

- The role of machine learning to artificial intelligence in network architecture, design, operation and maintenance, for example
- The role of AI/ML in existing and future communication networks infrastructures (6G and beyond)
- Improved tools for network orchestration and traffic management
- Large Language Models (LLM), Small Language Models (SLM) and Learning Model in telecommunications, for chip design and cloud computing and research at the interface of ML and quantum computing
- New system architectures for extended reality (XR), digital twin earth, metaverse, and immersive Live Experience (ILE)
- Quantum information technologies for hybrid architectures and secure network protocols
- Design and implementation technologies for hybrid architectures and scalable quantum networks
- Transition strategies and integration of quantum-safe technologies (i.e, post –quantum cryptography and quantum key distributions) into existing networks
- · Neuromorphic computing and new chip designs

#### Track 2

Applications and services for sustainable development

- Planning and introduction of radiocommunication networks (protocol design, verification, implementation, conformance, testing, etc)
- Network modelling, optimization, management, monitoring and maintenance (QoS, QoE, network and user security)
- Cybersecurity of network and users, privacy protection, and trust establishment in decentralized and distributed systems
- Smart transportation autonomous driving and urban mobility
- Embodied Al applications including healthcare (telemedicine, rehabilitations, assistive robotics, and assistance for the aging)
- Geospatial foundation models applications, design and development
- · Location-based services and spatial registration technologies
- · Sustainable smart cities and communities
- Applications of quantum technologies
- Sustainable online education, rural access and the role of Al in learning

# Track 3

Social, economic, environmental and policy dimensions of Al and frontier technologies

- Al regulations, governance and ethical considerations
- Policy frameworks for safe and ethical AI development
- Ethical frameworks for responsible quantum and AI development
- Standards and regulations for sustainable development
- Intellectual property rights in the AI era
- Waste management, healthcare, environmental protection
- Societal implications of brain-computer interfaces and neurotechnology
- Leveraging AI and quantum technologies to advance research
- Quantum education: curriculum development, tools and access

# **Scientific Committee**

Maria Antonia Brovelli, Politecnico di Milano, Italy

Christoph Dosch, Former Chairman of ITU-R Study Group 6; ARD, Germany

Emily Edwards, Duke University, United States

Martin Gastal, CERN

Eva Ibarrola, University of the Basque Country, Spain

Gyu Myoung Lee, Liverpool John Moores University, United Kingdom

Tiziana Margaria, University of Limerick, Ireland

Mitsuji Matsumoto, Waseda University Emeritus Professor, Japan

Roberto Minerva, Télécom SudParis, France

Vishnu Ram OV, Independent Consultant, India

Mostafa Hashem Sherif, Consultant, United States

Hao Qin, National University of Singapore, Singapore

# **Technical Programme Committee**

Mostafa Hashem Sherif, Consultant, United States

The Technical Programme Committee is composed of international subject-matter experts. Details are available at http://itu.int/en/ITU-T/academia/kaleidoscope/2026/Pages/progcom.aspx

#### **Additional information**

For additional information, please visit the conference website.

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