总秘书处（**SG**）

2018年2月20日，日内瓦

文号：	CL-18/08 TSB/AM	致： – 国际电联各成员国 – ITU-T部门成员、部门准成员、学术成员和相关国际组织、区域性组织和国家组织

联系人： Alessia Magliarditi
电话： +41 22 730 5882
传真： +41 22 730 5853
电子
邮件： kaleidoscope@itu.int

事由： **2018年国际电联大视野会议：面向5G未来的机器学习**
2018年11月26-28日，阿根廷圣菲

尊敬的先生/女士，

1　　　大视野会议活动是国际电联为增进与学术界和研究机构的合作而开展的举措。我高兴地向您通报，将第十次举办这一具有前瞻性的系列学术大会，目的在于确定信息通信技术（ICT）的新兴发展状况，尤其是那些需要国际标准来支持成功产品和服务发展的领域。2018年"面向5G未来的机器学习"（Machine learning for a 5G future）大视野会议将于2018年11月26-28日在阿根廷圣菲国家科技大学（Universidad Tecnológica Nacional）召开。

2　　　机器学习展示了帮助更加智能地使用网络生成数据的前景，使ICT网络运营商和服务提供商适应流量模式、安全风险和用户行为的变化，并将在编码算法、数据收集、存储和管理以及网络管理和编排等领域影响国际电联的标准化工作。

3　　　2018年大视野会议正在征集原创学术论文，要求内容针对未来通信网络的机器学习和人工智能技术研究的进展，涵盖网络设计、管理、实施和优化等所有方面。论文征集函全文参见**附件1**。论文提交截止日期为**2018年6月4日**。

4   国际电联成员国、部门成员、部门准成员和学术机构以及愿参加此工作的来自国际电联成员国的任何个人均可参加。这里所指的"个人"亦包括作为国际、区域和国家组织成员的个人。会议不收取任何费用，但亦不发放与会补贴。

5   我们鼓励全体国际电联成员在各自国家的学术界推广此次活动。

6   本次会议临近时，将在活动网页上提供有关注册和会议后勤服务方面的详细信息：http://itu.int/go/K-2018。**请注意，此次活动参与者的预注册仅以在线方式进行。**

7   我们谨在此提醒您，一些国家的公民需要获得签证才能入境阿根廷并逗留。在此情况下，需要向驻贵国的阿根廷代表机构（使馆或领事馆）申领签证。如贵国没有此类机构，则请向驻离出发国最近国家的此类机构申领。需要东道国帮助申办入境签证的与会者，请查询大视野会议活动网页http://itu.int/go/K-2018。信息将尽快发布。

顺致敬意！

[原件已签]

秘书长
赵厚麟

附件：1件

ANNEX 1

ITU Kaleidoscope 2018

Machine learning for a 5G future

The 10th ITU Kaleidoscope academic conference

Santa Fe, Argentina, 26-28 November 2018

Call for Papers

Kaleidoscope 2018: Machine learning for a 5G future is the tenth in a series of peer-reviewed academic conferences organized by ITU to bring together a wide range of views from universities, industry and research institutions. The aim of the Kaleidoscope conferences is to identify emerging developments in information and communication technologies (ICTs) and, in particular, areas in need of international standards to aid the healthy development of the Information Society.

Theme

Machine learning shows promise to assist smarter use of network-generated data, enabling ICT network operators and service providers to adapt to changes in traffic patterns, security risks and user behaviour. This will also affect ITU standardization work in fields such as coding algorithms; data collection, storage and management; and network management and orchestration.

Kaleidoscope 2018 invites the research community to share insights into emerging applications of machine learning capable of bringing more automation and intelligence to network design, operation and management. The conference will explore promising machine-learning technologies and applications, investigating how supporting standardization could ensure widespread access to the benefits of machine learning.

Contributors to Kaleidoscope 2018 are encouraged to consider questions such as, for example:

- What are the distinct technical requirements of machine-learning use cases in 5G and future networks with respect to network architectures, interfaces, protocols, algorithms and data formats?
- How might we verify the compatibility of machine-learning applications in 5G networks with legacy fixed and mobile communication networks?
- Are machine-learning capabilities and human expertise complementary? If so, how could we best go about exploiting this?
- What might be considered appropriate technical, legal and social models to govern access to the results of applied machine learning?

Objective

Kaleidoscope 2018 calls for original scientific papers addressing advances in research on machine learning and artificial intelligence techniques for future communication networks, covering all aspects of network design, management, implementation and optimization. Kaleidoscope 2018 will assist ITU standardization experts in capitalizing on machine learning in their preparations for the 5G era and beyond. Authors of outstanding papers will be invited to contribute to the work of ITU-T Focus Group on Machine Learning for Future Networks including 5G.

Audience

Kaleidoscope 2018 targets specialists in the fields of ICT and socio-economic development, including researchers, academics, students, engineers, policymakers, regulators, innovators and futurists.

Date and venue

26-28 November 2018, Universidad Tecnológica Nacional, Santa Fe, Argentina

Submission of papers

Prospective authors from ITU Member States are invited to submit full, original papers with a maximum length of eight pages, including abstract and references, using the template available on the event website. All papers will go through a double-blind peer-review process. Submission must be made electronically; see http://itu.int/go/K-2018 for more details on online submission (EDAS). Paper proposals will be evaluated according to content, originality, clarity, relevance to the conference's theme and, in particular, **significance to future standards**.

Deadlines

Submission of full paper proposals: *4 June 2018*
Notification of paper acceptance: *17 September 2018*
Submission of camera-ready accepted papers: *8 October 2018*

Publication and presentation

Accepted and presented papers will be published in the Conference Proceedings. In addition, extended versions of selected papers will be considered for publication in the *International Journal of Technology Marketing*, the *International Journal of Standardization Research,* or the *Journal of ICT Standardization.*

Awards

A prize fund totalling CHF 6 000.- will be shared among the authors of the three best papers, as judged by the Steering and Technical Programme Committees. In addition, young authors of up to 30 years of age presenting accepted papers will receive Young Author Recognition certificates.

Keywords

Information and communication technologies (ICTs), standards, standardization, technological innovation, information society, artificial intelligence, expert systems, machine learning, algorithms, swarm intelligence, neural networks, intelligent adaptive learning, big data analytics, data mining, fuzzy logic, statistical analysis, cognitive systems, communication technologies, communication networks, wireless communications, future networks, radio spectrum, security, privacy, reliability, Internet of Things, image and video communication, monitoring, forecasting, optimization, policy, regulation, ethics, intellectual property rights, technical cooperation, sustainability, development, access, equality, inclusiveness.

Suggested (non-exclusive) list of topics

Track 1: **Technology and architecture evolution**	• Machine learning in radio and wireless networks • Machine learning for network operation and management • Machine learning in software defined networking (SDN) and network function virtualization (NFV) • Information mining or traffic classification and botnet detection, predictive fault analysis, fraud detection • Data analytics, network management and orchestration • Machine learning in cloud-based networks • Spectrum allocation schemes with machine learning algorithms • Machine learning automatic provisioning, resource allocation and configuration including antenna selection and configuration • Massive MIMO communications with machine learning schemes • Machine learning for energy efficient, sustainable power management and green communications
Track 2: **Applications and services**	• Use cases and requirements of network intelligence • Application of artificial intelligence algorithms for big data analysis in 5G networks for intrusion detection • Prediction of subscribers' behaviour and churn • Performance monitoring and big data analysis • Standards for machine learning in self-organizing networks (SON) • Protocols and standards for network information mining including data semantics, interoperability, and search tools • Energy-aware/green communications via machine learning approaches • Machine learning and standardization for fault-tolerant networks • Resource allocation for shared/virtualized networks using machine learning • Security, performance, and monitoring applications using machine learning • Machine learning for Internet of Things (IoT) • Machine learning for industry, government and society • Machine learning for smart sustainable cities • Learning-based network optimization
Track 3: **Social, economic, environmental, legal and policy aspects**	• Experiences and best-practices using machine learning in operational networks • Implications and challenges brought by computer networks to machine learning theory and algorithms • Regulation, standardization and professional codes of conducts in machine learning • Ethical issues in machine learning • How to establish trust in machine learning outcomes • Effects of machine learning on liberal arts education

General Chairman

Rudy Omar Grether (Dean, Universidad Tecnológica Nacional, Santa Fe, Argentina)

Steering Committee

Héctor Mario Carril (ITU-T Study Group 20 Vice-Chairman, Argentina)
Christoph Dosch (ITU-R Study Group 6 Vice-Chairman; IRT GmbH, Germany)
Kai Jakobs (RWTH Aachen University, Germany)
Mitsuji Matsumoto (Waseda University Emeritus Professor, Japan)
Mostafa Hashem Sherif (Consultant, USA)

Host Committee

Chairman: Alfonso Pablo Trevignani (Universidad Tecnológica Nacional, Argentina)

Technical Programme Committee

Chairman: Mostafa Hashem Sherif (Consultant, USA)

The Technical Programme Committee is composed of over 80 subject-matter experts. Details are available at: http://itu.int/en/ITU-T/academia/kaleidoscope/2018/Pages/progcom.aspx.

Additional information

For additional information, please visit the conference website: http://itu.int/go/K-2018. Inquiries should be addressed to kaleidoscope@itu.int.

_____