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| **Keywords:** | ITU Journal; ICT Discoveries; Artificial Intelligence (AI); Editorial Board; Call for Papers. |
| **Abstract:** | This document provides an overview of the preparatory work needed to establish the ITU Journal: ICT Discoveries and publish its first special issue on “The impact of Artificial Intelligence (AI) on communication networks and services”, which will be launched at ITU Telecom World, in Busan, Republic of Korea, on 25‑28 September 2017. |

# 1 Introduction

The ITU Journal: *ICT Discoveries* will be a scholarly, professional, peer-reviewed publication managed by the Telecommunication Standardization Bureau (TSB), with the support of the General Secretariat and the other Bureaux.

*ICT Discoveries* will publish original research on telecommunication/ICT technical developments and their policy and regulatory, economic, social and legal dimensions. This multidisciplinary approach reflects ITU’s comprehensive field of interest and explores the convergence of telecommunication/ICT with other disciplines.

This broad scope is something ITU is uniquely positioned to achieve, also considering its diverse membership representing government, industry and academic and research institutes.

Contributors to the ITU Journal may influence the direction of ITU’s activities, and their research could also translate into related work within the United Nations (UN) system. Moreover, Member States could benefit from the ITU Journal by identifying the technical trends and aligning their own national development strategy with the ICT roadmap of UN, through ITU.

The ITU Journal first special issue on “*The impact of Artificial Intelligence (AI) on communication networks and services*” will explore novel applications of AI that can improve the performance and efficiency of communication networks and services.

# 2 Editorial Board

The structure of the ITU Journal’s Editorial Board appears as follows:

The Governance of the Editorial Board includes:

* The **Editor-in-Chief**,Prof. Jian Song, Tsinghua University, China, who has been appointed by the ITU Secretary-General to oversee the overall editorial process, maintain and enhance the ITU Journal’s quality and reputation, and provide guidance on the editorial strategy and its direction.
* **Associate Editors-in-Chief**, who are renowned experts coming from academia, research institutes and private sector. On a voluntary basis, they are committed to actively contributing to the development of the ITU Journal:
1. [Rajkumar Buyya](http://www.buyya.com/), Professor, University of Melbourne; and Director, Cloud Computing and Distributed Systems ([CLOUDS](http://www.gridbus.org/)) Laboratory
2. [Jun Kyun Choi](https://mnlab.kaist.ac.kr/professor), Professor, Korea Advanced Institute of Science and Technology (KAIST)
3. [Urs Gasser](http://hls.harvard.edu/faculty/directory/10298/Gasser), Professor, Harvard Law School; Executive Director, [Berkman Klein Center for Internet & Society at Harvard University](https://cyber.harvard.edu/), Harvard University
4. [Alison Gillwald](http://www.researchictafrica.net/people.php), Executive Director, Research ICT Africa; and Adjunct Professor, University of Cape Town Graduate School of Development, Policy and Practice
5. [Mostafa Hashem Sherif](http://www.itu.int/en/ITU-T/academia/kaleidoscope/2013/Pages/SherifM.aspx), Dr, AT&T, USA
6. [Fu Xiaolan](http://www.ccsp.ox.ac.uk/dr-xiaolan-fu), Professor and Director of Program for Technology and Management for Development, Oxford University

The first conference call with the Editor-in-Chief and the Associates took place on 19 April 2017 and the Terms of Reference (ToR) for the Editorial Board were approved.

* The **Outreach Chairman**, Stephen Ibaraki (Founder and Chairman, IFIP Global Industry Council; Ambassador, IBM WATSON Artificial Intelligence, XPRIZE, Canada), who helps advocate the ITU Journal and reach out to potential sponsors, partners, contributors, and reviewers.

For the first special issue a Call for Guest Editors has been launched and widely disseminated among academic and research circles, including ITU Academia members. They are expert on artificial intelligence (covering both technical and policy/legal aspects) whose main tasks are to promote the special issue to peers and colleagues; solicit potential authors; and provide advice on the paper review process:

1. [Urs Gasser](http://hls.harvard.edu/faculty/directory/10298/Gasser), Professor, Harvard Law School; Executive Director, [Berkman Klein Center for Internet & Society at Harvard University](https://cyber.harvard.edu/), Harvard University, United States of America
2. [Jun Zhu](http://bigml.cs.tsinghua.edu.cn/~jun/index.shtml), Associate Professor of Computer Science, [Tsinghua University](https://scholar.google.ch/citations?view_op=view_org&hl=en&org=15442380624744264287), People’s Rep. of China
3. Deyi Li, Professor, Chinese Academy of Engineering, People’s Rep. of China
4. [Daniel Dajun Zeng](http://www.u.arizona.edu/~zeng/), Professor, University of Arizona, United States of America
5. [Larry Holder](http://www.eecs.wsu.edu/~holder/), Professor, Washington State University, United States of America

The Guest Editors will also help identify **reviewers**, i.e. international experts on AI who evaluate the papers submitted to the ITU Journal, through a single-blind, peer-review process, using [EDAS: Editor's Assistant](https://edas.info/doc/).

A **Technical Committee** (TC) might be established in the future to act as an advisory committee to the Governance of the Editorial Board, to help identify important topics for the ITU Journal’s issues and disseminate Calls for Papers. It would be composed of about 30/40 experts covering a broad range of research areas. The Technical Committee might also include the pool of reviewers.

The ITU Journal’s Editorial Board also includes the **ITU Editorial Team**, which is responsible for managing the overall operations of the ITU Journal (including the review process through the EDAS system, the ITU’s Journal managing online platform, etc.), supporting the Editor-in-Chief and performing general coordination among all stakeholders. The ITU Editorial Team includes:

* Advisors
* Executive Editor-in-Chief
* Managing Editor
* Administrative Assistant
* Web Manager
* Publishing Editor
* Visual Identity Team
* Marketing and Communication Team
* Outreach Team

# 3 Call for Papers (CfP) – First special issue

The Call for Papers of the first special issue invites submissions to explore novel applications of AI techniques that can improve the performance and efficiency of communication networks, create new services and ensure optimal users experience. It will also include contributions on related policy, legal, societal and ethical aspects that can help safely unlock the potential of AI techniques in the telecommunication field, and foster technical cooperation and digital inclusion.

AI techniques provide ways to expand human intelligence and can generate a big variety of applications that can be beneficial to society and businesses. AI is dominating headlines with many examples of its applications in our current life, such as web search, spam filtering, image recognition, speech understanding and self-driving cars. This explains why many companies in different areas have been heavily investing in AI research in recent years.

Communication infrastructures are expected to become increasingly dynamic and responsive, in order to operate efficiently and at low cost under challenging conditions. Predictive algorithms, computational analysis, reasoning and problem solving techniques, supported by forward-looking policies and a common set of standards, can help this direction.

The Editorial Board is promoting the ITU Journal and will disseminate the Call for Papers to relevant mailing lists and also via news logs, blogs, and advertisements on specialized websites (including relevant Associations), social media, interviews, videos, infographics, and presentations at relevant events.

Selected high-level experts on AI are being invited to submit research papers by mid-July. The first invited paper has been received already: *Machine Learning for Communications,* authored by Slawomir Stanczak and Thomas Wiegand from Fraunhofer Heinrich Hertz Institute & Berlin Institute of Technology, Berlin, Germany, and Wojciech Samek fromFraunhofer Heinrich Hertz Institute.

Regular submissions from researchers, scholars, telecommunication/ICT practitioners and standards organizations, policymakers, governments’ officials and industry representatives who are experts on AI, are invited until 31 August 2017. Submissions are made electronically using [EDAS: Editor’s Assistant](https://edas.info/doc/). Templates and instructions can be found on the ITU Journal’s webpage.

The ITU Journal is digital with open access – articles will be available for download free of charge. As soon as they get accepted, papers will be continuously published on the ITU website. They will then be bundled in a yearly volume which will be submitted for inclusion in the most prestigious indexes/aggregators (Scopus, Web of Science, Google Scholar, etc.), and disseminated widely to relevant circles and the whole ITU membership.

For further information, please visit the ITU Journal webpage or contact the Editorial Board at journal@itu.int.

# 4 Launch

A ceremony to launch the ITU Journal and its first special issue on “*The impact of Artificial Intelligence (AI) on communication networks and services*” will be held at ITU Telecom World, in Busan, Republic of Korea, on 25-28 September 2017, with the presence of the ITU Secretary General, TSB Director, Editor-in-Chief and some representatives of the Editorial Board.

The presentation of the yearly volume is scheduled for the end of 2017.

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