Closing

Alessia Magliarditi
ITU Kaleidoscope Coordinator

26-28 November
Santa Fe, Argentina
Chaesub Lee, Director, Telecommunication Standardization Bureau, ITU
Rudy Omar Grether, Dean of the Santa Fe Regional Faculty, Universidad Tecnológica Nacional, Argentina and ITU Kaleidoscope 2018 General Chairman
Hugo Miguel, Modernization Government Secretariat, Argentina
Maria Victoria Sukenik, Modernization Government Secretariat, Argentina
Héctor Mario Carril, ITU-T Study Group 20 Vice-Chairman, Argentina

26-28 November
Santa Fe, Argentina
ITU Kaleidoscope 2018
Programme Overview

• 47 research papers submitted for review from 20 countries
• 15 papers accepted for publication and presentation from 11 countries (majority from academic institutions)
• Acceptance ratio: ~32%
• 2 Invited papers
• 1 Keynote speech
• 1 special session – Jules Verne’s corner
• 3 tutorials
• 6 Latin American University Exhibitors
• Approximately 240 participants from 18 countries
• Approximately 70 remote participants!
Media Coverage

In Spanish

- El Litoral
- Santa Fe Government Portal
- Diario la Opinion

In English

- Daily Highlights – ITU News
Local Universities Exhibit

In parallel with the plenary conference sessions, showcase of academic research, special projects, and literature in Latin America’s academic circles.

Exhibitors:

Universidad Austral (Argentina)
Universidad Nacional de La Plata (Argentina)
Universidad Nacional del Litoral (Argentina)
Universidad Nacional de San Luis (Argentina)
Universidad Tecnológica Nacional, Facultad Regional Santa Fe (Argentina)
Universidad Distrital Francisco José de Caldas (Colombia)
Conference Proceedings

http://itu.int/go/K-2018

Direct link:
Kaleidoscope features in the IEEE Communications Standards Magazine
IEEE Communications Magazine

February 2010, Vol. 48, No. 2

LTE Update
Optical Communications
ITU-T Standards: Innovations for Digital Inclusion

Tacks in Automotive Networking

IEE Communications Magazine

November 2009, Vol. 47, No. 5

Optical Communications: Highways of the Future
The First ITU-T Kaleidoscope Event: "Innovations in NGN"

The series of articles presents selected papers from the Second International Multimedia Telecommunications Conference (IMTC-2009) held in May 2009 in Santa Fe, Argentina. The conference focused on the theme of "Optical Communications: Highways of the Future." The articles cover various aspects of optical communications, including advancements in fiber optics, optical networking, and applications in telecommunications and data networks. 

The First ITU-T Kaleidoscope Event: "Innovations in NGN"

The First ITU-T Kaleidoscope Event focused on "Innovations in NGN" by bringing together experts from academia, industry, and regulators to discuss the future of the Next Generation Network (NGN). The event highlighted advancements in technologies such as software-defined networking (SDN), network function virtualization (NFV), and cloud computing. The series of articles features selected papers presented at the conference, providing insights into the latest developments and future directions in the field of NGN.

The Second ITU-T Kaleidoscope Conference: "Innovations for Digital Inclusion"

The second kaleidoscope conference was held in partnership with the ITU and the World Summit on the Information Society (WSIS). This event focused on "Innovations for Digital Inclusion," aiming to address the gap between those with access to digital technologies and those without. The conference featured discussions on strategies to bridge the digital divide, including policies and initiatives to improve access to information and communication technologies (ICTs) in underserved communities.

The Third ITU-T Kaleidoscope Conference: "Innovations for Digital Inclusion"

The third kaleidoscope conference continued the theme of "Innovations for Digital Inclusion," with a focus on the role of ICTs in promoting social and economic development. The event highlighted projects and initiatives that leverage technology to empower communities and improve quality of life, particularly in rural and remote areas.

The inaugural Kaleidoscope Conference in 2013 took place in Cape Town, South Africa. This year, the conference will be held in Santa Fe, Argentina from December 10-14, 2014. This fourth event in the series focused on the role of information and communication technologies (ICTs) in society. It also included discussions on socio-economic, political, and environmental challenges. The conference aimed to bring together experts from around the world to share their insights and experiences on the use of ICTs in various sectors.

The conference featured a range of workshops, panels, and keynote speeches, covering topics such as the role of ICTs in education, healthcare, and disaster management. The event also included an exhibition where companies showcased their latest products and services.

The 2014 edition of the conference was a great success, with over 150 participants from 40 countries. The conference proceedings were published in the IEEE Communications Magazine, providing a valuable resource for researchers and practitioners in the field of ICTs.

This year’s conference will be held in Santa Fe, Argentina, offering a unique opportunity for participants to experience the vibrant culture and natural beauty of the region while engaging in meaningful discussions on the future of networks and services.

Guest Editorial

Selected Papers from the Seventh ITU Kaleidoscope Academic Conference

This issue of the Communications Standards Supplement includes updated versions of selected papers from the Seventh International Telecommunications Union (ITU) Kaleidoscope Academic Conference. The conference took place in Barcelona, Spain, on 4-11 November 2015, as part of the celebration of the ITU’s 150th anniversary. The topics covered a wide range of subjects, including advances in network and fixed networks, ad hoc and sensor networks, network and service management, and selected papers from the ITU. The authors presented their research on cutting-edge technologies and innovations in the field of telecommunications.

The papers were carefully selected by a panel of experts to highlight the most significant contributions to the field. They cover a variety of topics, such as the Internet of Things (IoT), network and service management, and emerging technologies like 5G and cloud computing.

The selected papers will be featured in the Communications Standards Supplement, providing a valuable resource for researchers and practitioners in the field of telecommunications.

Join the online discussion group for this issue on: http://communications.e-ictu.org/boards/boards.html
Sustainability

resources

profit

environment

Selected Papers from the Eighth ITU Kaleidoscope Academic Conference

The issue consists of updated versions of presentations at the eighth International Telecommunication Union Kaleidoscope Academic Conference. The conference was held in Bangkok, Thailand from 14–16 November 2016, with ITU Telecom World 2016. The topic of the conference is "ICTs for a Sustainable World" and the event was co-sponsored by the Institute of Electrical and Electronics Engineers (IEEE) and the ITU Communication Society (ComSoc). Representatives from 31 countries participated.

The theme of the biennial Kaleidoscope conference is "Challenges for a Data-Driven Society," and will be in Nanjing, China from 27–29 November 2017.

A paper is an update of a keynote by Mr. Simon Twyman, British Broadcasting Corporation (BBC), with the title "From Environmentally Sustainable Broadband to Sustainable Broadcasting Experience." Mr. Twyman, a BBC executive, has addressed the topic of carbon footprint in television broadcasting. The paper presents a case study of the BBC's efforts to reduce its carbon footprint.

An additional paper is available on the conference website. The paper presents a broker system, based on the Alerting Protocol (CAP) of Recommendation ITU-T, to coordinate emergency warnings on natural disasters in countries affected by these events. The paper discusses a case study of the BBC's efforts to reduce its carbon footprint.

The second article, by Luca Chiaraviglio et al., explores the potential of using Big Data for improving the efficiency of the Internet of Things (IoT). The authors propose modifying the current standard (Q27.31.2) for identifying the calling line identifier by introducing a new algorithm that can handle large-scale data traffic. The authors review some of the techniques for hacking the Internet Protocol (IP) and suggest methods to prevent such attacks.
For submissions:

1. Please read the guidelines:
   http://www.comsoc.org/commag/author-guidelines

2. Please go to
   https://mc.manuscriptcentral.com/m-comstd

Deadline: 15 January 2019

Contact: Mostafa Hashem Sherif, Consultant, USA – TPC Chair
Other international Journals

Extended versions of selected papers can be considered for publication in the following Journals:

- International Journal of Technology Marketing
- International Journal of Standardization Research
- Journal of ICT Standardization

Contact: kaleidoscope@itu.int
Launched in 2017, scholarly, professional, peer-reviewed, digital, online publication.

It publishes original research on telecommunication/ICT and also features review articles, best practice implementation tutorials and case studies.

It covers technical developments and their policy and regulatory, economic, social and legal dimensions.

The interdisciplinary approach of the Journal reflects the ITU’s comprehensive field of interest.
ITU KALEIDOSCOPE
SANTA FE 2018
Machine learning for a 5G future

First special issue on
The impact of Artificial Intelligence on communication networks and services

ISSUE NO.2
Data for Good

Stay tuned for the next special issue!

https://itu.int/en/journal/Pages/default.aspx

26-28 November
Santa Fe, Argentina
Our sincere thanks goes to.....

Chaesub Lee
Director, Telecommunication Standardization Bureau, ITU
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, Professor Emeritus, Japan
Mostafa Hashem Sherif, Consultant, USA – TPC Chair

Almost 80 Technical Programme Committee (TPC) members
Host University

UNIVERSIDAD TECNOLOGICA NACIONAL

26-28 November
Santa Fe, Argentina
Host Country

Secretaría de Modernización
Presidencia de la Nación
Supporters
Technical co-sponsors

IEEE

IEEE ComSoc
General Chairman

Rudy Omar Grether, Dean of the Santa Fe Regional Faculty, Universidad Tecnológica Nacional, Argentina

Host Committee

Chairman: Alfonso Pablo Trevignani
Diego Angelo Bolatti
Walter Daniel Justet
Juan Pablo Martín
María Celeste Weidmann
Our sincere **thanks** also goes to......

Alfonso Pablo Trevignani
Walter Daniel Justet
María Celeste Weidmann

Universidad Tecnológica Nacional, Argentina
All the local volunteers!
Sincere thanks also goes to…..

Alessia Magliarditi
ITU Kaleidoscope Coordinator

26-28 November
Santa Fe, Argentina
ITU Kaleidoscope Coordinator

Emer Windsor
Kaleidoscope Assistant

Ilia Londo
IT Support

Simiso Dlodlo
Kaleidoscope Collaborator

Pascal Borde
Promotional support

ITU staff

Alessia Magliarditi

Erica Campilongo
Kaleidoscope Collaborator and Coordinator of Jules Verne's corner and Local Universities Exhibit
Ten ITU Kaleidoscope conferences have been organized worldwide.
Stay tuned for the next ITU Kaleidoscope conference!

Best Paper Awards and Young Author Recognition Ceremony

26-28 November
Santa Fe, Argentina
Award Committee
Five distinguished conference attendees

- **AC Chair**: Alessia Magliarditi, ITU Kaleidoscope Coordinator

- **AC Members**:
  1. Tomás Bracalenti, UTN, Argentina
  2. Joan Garcia-Haro, Technical University of Cartagena, Spain
  3. Eva Ibarrola, University of the Basque Country, Spain
  4. Mostafa Hashem Sherif, Kaleidoscope Steering Committee Member and TPC Chair
  5. Duncan Sparrel, Consultant, USA
Best Paper Awards

- **First** paper: ITU Certificate + USD 3,000
- **Second** paper: ITU Certificate + USD 2,000
- **Third** Paper: ITU Certificate + USD 1,000
Criteria

- 1 – Clarity
- 2 – Relevance to the conference theme
- 3 – Relevance to standards
- 4 - Presentation
Six nominees

- Best ranking papers that were recommended for best paper award by the Technical Programme Committee (double-blind/peer-review process) and Steering Committee.

- Six candidates
  - Four in **Track 1** (Technology and architecture evolution)
  - Two in **Track 3** (Social, economic, environmental, legal and policy aspects)
Nominated papers and presenters

S2.1 Self-Healing and Resilience in Future 5G Cognitive Autonomous Networks
Janne Ali-Tolppa (Nokia Bell Labs, Germany); Szilárd Kocsis, Benedek Schultz and Levente Bodrog (Nokia Bell Labs, Hungary); Márton Kajó (Technical University of Munich, Germany)

S2.3 - Multifractal Modeling of the Radio Electric Spectrum Applied in Cognitive Radio Networks
Luis Tuberquia David and Cesar Hernández, Universidad Distrital Francisco Jose de Caldas, Colombia

S2.4 - Towards Cognitive Autonomous Network in 5G
Stephen S. Mwanje and Christian Mannweiler, Nokia Bell Labs, Germany

S3.2 - Consideration on Automation of 5G Network Slicing with Machine Learning
Ved P. Kafle, National Institute of Information and Communications Technology (NICT), Japan

S6.1 A Gendered Perspective on Artificial Intelligence
Smriti Parsheera, National Institute of Public Finance and Policy; Indian Institute of Technology, Delhi, India

S6.2 Ethical Framework for Machine Learning
Charru Malhotra (Indian Institute of Public Administration, India); Vinod Kotwal (Department of Telecommunications, India); Surabhi Dalal (India Centre for Migration, India)
And the winners are...
Third prize

ETHICAL FRAMEWORK FOR MACHINE LEARNING

Presented by
Charru Malhotra
Indian Institute of Public Administration, India

co-authored with
Vinod Kotwal and Surabhi Dalal
Department of Telecommunications and India Centre for Migration, India
Second prize

A GENDERED PERSPECTIVE ON ARTIFICIAL INTELLIGENCE

Presented by
Smriti Parsheera
National Institute of Public Finance and Policy, New Delhi, India
First prize

CONSIDERATION ON AUTOMATION OF 5G NETWORK SLICING WITH MACHINE LEARNING

Presented by

Ved P. Kafle
NICT, Japan

co-authored with
Yusuke Fukushima, Pedro Martinez-Julia and Takaya Miyazawa
8 Young Author Recognition certificates

1. **Emilia Gibellini** (Telecom Argentina, Argentina)

S1.2 Unsupervised Learning for Detection of Leakage from the HFC Network - Claudio Righetti (Telecom Argentina and Universidad de Buenos Aires, Argentina)

2. **Luis Miguel Tuberquia David** (Universidad Distrital Francisco Jose de Caldas, Colombia)

S2.3 Multifractal Modeling of the Radio Electric Spectrum Applied in Cognitive Radio Networks - Cesar Hernández (Universidad Distrital Francisco Jose de Caldas, Colombia)

3. **Ruben Martinez Sandoval** (Universidad Politécnica de Cartagena, Spain)

S5.1 Smart Usage of Multiple RAT in IoT-oriented 5G Networks: A Reinforcement Learning Approach - Sebastian Canovas-Carrasco, Joan Garcia-Haro and Antonio-Javier Garcia-Sanchez (Technical University of Cartagena, Spain)
4. **Sebastian Canovas-Carrasco** (Technical University of Cartagena, Spain)

S5.1 Smart Usage of Multiple RAT in IoT-oriented 5G Networks: A Reinforcement Learning Approach - Ruben Martínez Sandoval (Universidad Politécnica de Cartagena, Spain); Joan Garcia-Haro and Antonio-Javier Garcia-Sanchez (Technical University of Cartagena, Spain)

5. **Bruno Marengo** (Universidad Tecnológica Nacional, Argentina)

S5.2 Message Collision Identification Approach Using Machine Learning - Juan Pablo Martín (Universidad Tecnológica Nacional; Facultad Regional San Nicolás, Argentina); Juan Pablo Prina and Martín Gabriel Riolfo (Universidad Tecnológica Nacional, Argentina)

6. **Juan Pablo Prina** (Universidad Tecnológica Nacional, Argentina)

S5.2 Message Collision Identification Approach Using Machine Learning - Juan P Martín (Universidad Tecnológica Nacional; Facultad Regional San Nicolás, Argentina); Bruno Marengo, Martín Gabriel Riolfo (Universidad Tecnológica Nacional, Argentina)
7. **Pamela Ferrari** (Universidad Tecnológica Nacional, Argentina)


8. **Gustavo Olivieri** (Universidad Tecnológica Nacional, Argentina)

Special mention

Universidad Distrital Francisco José de Caldas, Facultad Tecnológica, Bolívar, Colombia

1. Alejandra Herrera Ramirez (Estudiante)
2. Angela Marcela Pineda Lozano (Estudiante)
3. Cristian Camilo Casteñeda Agudelo (Estudiante)
4. Edwin Oswaldo Castillo Rivera (Estudiante)
5. Frank Nicolas Rivera Lozano (Estudiante)
6. Giovani Mancilla Gaona (Docente)
7. Jenny Lorena Yepes Suarez (Estudiante)
8. Juan Paulo Salamanca Oyuela (Estudiante)
9. Maria Alejandra Ramirez Montenegro (Estudiante)
10. Neider Yampol Serrato Losada (Estudiante)
11. William Martinez Reyes (Estudiante)
12. Yesid Fabian Briceño Murillo
CONGRATULATIONS!!!
Thank you