It is a great privilege and pleasure to welcome you to the 19th ICIN conference, and to invite you to share knowledge and ideas on Innovations in Clouds, Internet and Networks.

As usual, the conference is a great opportunity to explore new and emerging technology trends in the Telecom industry and academia, as well as to discuss their impact on business models and customer experience. SDN, Virtualization, 5G, WebRTC, PaaS, Big Data and Internet of Things are some of the key technologies that will be addressed through a set of 18 presentations carefully selected by the members of our technical programme committee, completed by 3 invited talks on today’s hot topics.

The opening session features an introductory keynote from Raouf Boutaba, on the software defined future of networking, completed by speeches from Nicolas Demassieux, Senior VP Research at Orange and from Ina Minei, network architect at Google on programmatic management plane. On day 2, Marcus Weldon, corporate CTO and Bell Labs President at Nokia will provide his insights based on his recent book “The Future X Network: A Bell Labs Perspective”; and Volker Ziegler will detail us the Nokia architecture vision for 5G on day 3.

The conference event also features a special session on economy and regulation of digital platforms, with Philippe Distler, member of the executive board of the French Telecom Regulatory Body (ARCEP) and the economist Marc Bourreau; a good place to discuss the new “uber-ization” trend in our industries. In addition, ICIN is hosting the 1st workshop on Green Communications Systems, as well as 20+ posters and demos to let you touch new trends and topics.

I am looking forward to meeting you at #ICIN2016 !

Emmanuel Bertin
Chairman of the ICIN 2016 Technical Programme Committee
Orange Expert Future Networks
## Programme at a Glance

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<td>9:00 Coffee Break</td>
<td>9:15 keynote speech, Volker Ziegler, Nokia</td>
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<td>10:00 Registration and Welcome Coffee</td>
<td>10:00 Coffee Break</td>
<td>10:00 Coffee Break</td>
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<td>10:30 Regular session (Track D)</td>
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<td>10:45 Introductory keynote, Raouf Boutaba</td>
<td>10:45 Keynote speech, Nicolas Demassieux, Orange</td>
<td>10:00 Regular Session (Track A)</td>
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<tr>
<td>10:45 Keynote speech, Ina Minei, Google</td>
<td>14:00 Regular session (Track C) - ground floor -</td>
<td>14:00 Regular Session (Track D) - ground floor -</td>
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<td>12:30 Lunch</td>
<td>14:00 Workshop on Green Com. Systems - 1st floor -</td>
<td>15:00 Closing Session and awards</td>
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<tr>
<td>14:00 Keynote speech, Nicolas Demassieux, Orange</td>
<td>14:00 Invited Talks (Track A)</td>
<td>14:45 Poster Introductions (session 2)</td>
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<tr>
<td>14:45 Keynote speech, Ina Minei, Google</td>
<td>16:00 Coffee break and posters (session 2)</td>
<td>15:30 Coffee break and end of the event</td>
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<tr>
<td>15:30 Coffee break and posters (session 1)</td>
<td>16:30 Special Session on digital platforms economics &amp; regulation</td>
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<tr>
<td>16:00 Invited Talks (Track A)</td>
<td>17:40 Poster Introductions (session 2)</td>
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<td>18:00 Poster Introductions (session 1)</td>
<td>18:00 Poster Session 2 - ground floor and 1st floor -</td>
<td>18:30 TPC meeting - room IA 58/60 -</td>
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<td>18:30 Poster Session 1 and Welcome Reception - ground floor and 1st floor -</td>
<td>18:30 Poster Session 2 - ground floor and 1st floor -</td>
<td>20:00 Gala Dinner</td>
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</tbody>
</table>
Marcus Weldon  
President of Bell Labs and Corporate Chief Technology Officer, Nokia, USA 
The Future X Network: A Bell Labs Perspective

Marcus Weldon is responsible for coordinating the technical strategy across the company and driving technological and architectural innovations into the portfolio. Marcus is considered one of the key person in our industry in terms of the clarity, depth and breadth of his vision, and he has a phenomenal track record in terms of picking the right technological disruptions and opportunities, from vectoring in Access, to the evolution to LTE overlay and Small Cells, to the emergence of virtualization and SDN as profound industry changing forces. He is now combining this vision with the power of Bell Labs, to create an unrivalled innovation engine for Alcatel-Lucent.

Marcus holds a B.S in Chemistry and Computer Science from King’s College, London, and a Ph.D. degree in Physical Chemistry from Harvard University. In 1995, he joined the Physics Division at AT&T Bell Labs as a post-doctoral researcher, before becoming a Member of Technical Staff in the Strategic Research Division, where he won a series of scientific and engineering society awards. In 2000, Dr. Weldon started work on fiber-based Broadband Access technologies and, in 2006 he was appointed CTO of the Wireline Networks Product Division in Alcatel-Lucent following the merger of Alcatel and Lucent, with responsibility for DSL and FTTH, IPTV, Home Networking and IMS.

He was one of the primary architects behind the evolution of the Triple Play Service Delivery Architecture to the High Leverage Network™, widely accepted industry architecture for an ‘all IP, converged wireline and wireless, intelligent, optimized networking’. Marcus was also a primary driver behind the groundbreaking and multiple award-winning LightRadio™ architecture for next generation wireless networks and continues to help drive the company in new directions, including defining the new programmable ‘Cloud Network’ paradigm that will enable the network to emulate computing and become a agile, reconfigurable, consumable platform for innovation and value creation for Cloud services (based on the principles of Software-Defined Networking and Network Functions Virtualization).

Marcus is a member of the Executive Board of ATIS (Alliance for Telecommunications Industry Solutions) and a member of the FCC Open Internet Advisory Committee, as well as an advisor to select Venture Investment Funds. He is one part of a happy Anglo-American union which has produced 5 progeny, ages ranging from 4-19. He lives in Summit, NJ when not on a plane or train.

Volker Ziegler  
Chief Architect, Technology and Innovation, Nokia Networks, Germany  
The Nokia Architecture Vision for the 5G era

Volker Ziegler serves as Chief Architect of Nokia Networks. He leads and owns the long term Nokia Networks e2e architecture, steers and leverages architectural development cycle for sustainable and innovation led growth and competitive differentiation: ensures that Nokia Networks e2e architecture evolves in step with Nokia top customers.

Volker has more than 20 years of Telco and IT industry experience and has an excellent understanding of both Technology and Business. He works closely with the Nokia Unit Heads and Technology/Innovation leadership teams to define and move forward the Nokia architecture vision and associated network evolution. He has previously led Nokia Siemens Networks (NSN) strategy and business portfolio and, the global business development, sales and operations strategy and transformation of NSN.

Prior to that, Volker has successfully served as the Head of the North East Region of NSN. This role has included the profit and loss responsibility as well as full accountability for operational sales and sales for one of the seven world regions of NSN including Scandinavia, Russia, CIS and Turkey. He holds a PhD in Electrical Engineering from the University of Karlsruhe and is graduated from the Harvard executive development program.

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Track A – NETWORK IT-ISATION AND 5G
Chair: Prosper Chemouil (Orange Labs, France)

Invited Talks – 16:00-18:00 – Tuesday 1
Introduction and insights
Prosper Chemouil

Intelligent edges, how to benefit from SDN/NFV
Andreas Gladisch (VP convergent Networks, Deutsche Telekom Labs, Germany)

5G: It’s the Network, Stupid
Dirk Kutscher (NEC laboratories Europe, Germany)

A Vision for Explicit Path-Cooperative Transport
Brian Trammell and Mirja Kuehlewind (ETH Zurich, Switzerland)

Regular Session – 14:00-15:00 – Thursday 3

Cloud RAN Challenges and Solutions
Rajeev Agrawal and Anand Bedekar (Nokia, USA); Troels Kolding (Nokia, Denmark); Vishnus Ram (Nokia, India)

Congestion Control Using OpenFlow in Software Defined Data Center Networks
Masoumeh Gholami and Behzad Akbari (Tarbiat Modares University, Iran)

Experimentation as an ISP-Service
Zaineb Tahri, Ramzi Ouafi and Mohamed Karim Sbai (ESPRIT School of Engineering, Tunisia)

Regular Session – 10:30-12:30 – Wednesday 2

Introductions and insights
Françoise Soulé Fogelman

Secure Multi-party Based Cloud Computing Framework for Statistical Data Analysis of Encrypted Data
Harsha S Gadiyawasam Pussewalage (University of Agder, Norway)

Data I/O Provision for Spark Applications in a Mesos Cluster
Nam Hoai Do, Tien Van Do and Xuan Tran (Budapest University of Technology and Economics, Hungary); Lorant Farkas and Csaba Rotter (Nokia Networks, Hungary)

Subjective Perception Scoring
Jörg Niemöller (Ericsson, Sweden); Nina Washington (Ericsson Research, Sweden)

Fighting Fire with Fire: Survey of Strategies for Counteracting The Complexity of Future Networks Management
Anne-Marie C. Bosneag, Sidath Handurukande, MingXue Wang (Ericsson Research Centre, Ireland)

Poster Session 1 – 15:30-16:00 and 18:30-21:00 – Tuesday 1

Using Linux Containers in Telecom Applications
Csaba Rotter, Gergely Csatári, Lorant Farkas, Gabor Nyiri, Laszlo Janosi and Robert Springer (Nokia Networks, Hungary)

Biochemically-inspired Method for Constructing Service Space in Virtualized Network System
Go Hasegawa, Shun Sakurai and Masayuki Murata (Osaka University, Japan)

An Adaptive Observation Window for Verifying Configuration Changes in Self-Organizing Networks
Tsventko Tsvetkov (Technische Universität München, Germany); Janne Ali-Tolppa (Nokia Networks, Germany)

An Efficient Security Framework to Detect Intrusions At Virtual Network Layer of Cloud Computing
Kamatchi A. and Chirag Modi (National Institute of Technology Goa, India)

Research Challenges in 5G Networks: a HetNets Perspective
Muhammad Umer Farooq, Cormac J. Sreenan and Kenneth N Brown (University College Cork, Ireland)

Poster Session 2 – 16:00-16:30 and 18:00-19:00 – Wednesday 2

A Genetic Feature Selection Algorithm for Anomaly Classification in Mobile Networks
Márton Kajó and Szabolcs Nováczki (Nokia, Hungary)

A Method for Virtual Extension of LZW Compression Dictionary
István Finta (Nokia & Óbuda University, Hungary); Lóránt Farkas (Nokia, Hungary); Sándor Szénási and Szabolcs Sergyán (Óbuda University, Hungary)

Presentation titles and speakers are provisional and subject to change without notice.
Track C – REAL-TIME COMMUNICATION
PLATFOMS AND SERVICES
Chair: Axel Küpper (Deutsche Telekom, Germany)

Regular Session – 14:00-16:00 – Wednesday 2

Introductions and insights
Axel Küpper

Global Identity and Reachability Framework for Interoperable
P2P Communication Services
Ibrahim Tarir-Jayed, Rebecca Copeland, Noel Crespi (Institut Mines-
Telecom, France); Felix Bierle, Sebastian Gondör, Axel Küpper
(TU Berlin, Germany); Ahmed Bouabdallah (Institut Mines-Telecom,
France); Marc Emmelmann and Andrea Corici (Fraunhofer FOKUS
Institute, Germany); Kevin Corre and Jean-Michel Crom (Orange
Labs, France); Frank Oberle and Ingo Friese (Deutsche Telekom
Laboratories, Germany); Ana Caldeira and Gil Dias (Universidade
de Lisboa, Portugal); Ricardo Jorge Fernandes Chaves and Nuno
Santos (INESC-ID & IST Portugal, Portugal)

TURN Servers Impacts Over WebRTC QoE in 4G Network
Antonin Marechal and Ewa Janczukowicz (Orange Labs, France)

A Question of Quality - VoIP, WebRTC or VoLTE?
Rebecca Copeland (Institut Mines-Télécom & Core Viewpoint Limited,
United Kingdom); Michael Copeland (Core Viewpoint Ltd, United
Kingdom);

WebRTC and IMS: Parallel Universes on a Collision Course?
Stephane Tuffin (Orange Labs, France)

Poster Session 1 – 15:30-16:00 and 18:30-21:00 – Tuesday 1

When Coactivity Enhances Video Communication Experience
Mathilde Cosquer and Claude Daloz (Orange, France)

Characterization of Priority Control Based on Media Access
Control Method SP-MAC Over WLAN
Ryo Ando, Ryo Hamamoto, Hirokazu Obata, Chisa Takano and
Kanji Ishida (Hiroshima City University, Japan)

Poster Session 2 – 16:00-16:00 and 18:30-21:00 – Tuesday 1

Anticipating Households’ Demand for Peak Bandwidth: a
Revision of a Model From the Broadband Stakeholder Group
Brahim Ait-I-a (British Telecommunications PLC, United Kingdom);
Douglas Williams (BT Innovate and Design, United Kingdom)

FlashPoll: A Context-aware Polling Ecosystem for Mobile
Participation
Bensant Deva and Sandro Rodríguez Garzon (Technische Universität
Berlin & Telekom Innovation Laboratories, Germany); Axel Küpper (TU
Berlin, Germany)

A Text-to-Picture m-Learning System in a Private Wireless Mesh
Network
AbdelGhani Karkar and Amal Dandashi (Qatar University, Qatar)

SDP-based Signaling and OTT Services: History and Perspective
on an Evolving Trend
Jean-Charles Grégoire (University of Quebec, INRS, Canada)

Design and Implementation of a High Performant PaaS Platform
for Creating Novel Real-Time Communication Paradigms
Alice Cherrieux, Maiorano Pasquale and Flavio Murgia (Fraunhofer
Institut FOKUS, Germany); Boni García and Michel Gallego Canillo
(Universidad Rey Juan Carlos, Spain); Giuseppe Carella and Lorenzo
Tomassini (TU Berlin, Germany); Alin Calincic and Cristian Spoiala
(University Stefan cel Mare Suceava, Romania)

The ABC of Future Global Reachability
François Touan, Emmanuel Le Huérou and Eric Beaufils (Orange
Labs, France)

Track D – INTERNET OF THINGS
Chair: Payam Barnaghi (University of Surrey, UK)

Regular Session – 10:30-12:30 – Thursday 3

Introductions and insights
Payam Barnaghi

Resource Allocation Using Virtual Objects in the Internet of Things: a QoI Oriented Consensus Algorithm
Andrea Carta, Virginia Pilloni and Luigi Alzorzi (University of Cagliari,
Italy)

Applied Attribute-based Encryption Schemes
Sebastian Zickau, Dirk Thatmann, Artjom Butyrtschik, Iwailo Denisow
and Axel Küpper (TU Berlin, Germany)

Adaptive and Composite Privacy and Security Mechanism for IoT
Communication
Swaminathan Seetharaman and Sudipta Ghosh (Wipro Technologies,
India)

A Reputation and Knowledge Based Trust Service Platform for
Trustworthy Social Internet of Things
Nguyen Binh Truong (Liverpool John Moores University, United
Kingdom); Tai-Won Um (Electronics andTelecommunications
Research Institute, Korea); Gyu Myoung Lee (Liverpool John Moores
University, United Kingdom)

Regular Session – 14:00-15:00 – Thursday 3

Managing Personal Information: A Telco Perspective
Ewelina Szczekocka and Justyna Gromada (Orange Labs, Poland);
Agata Filipowska, Piotr Jankowiak and Piotr Kaluzny (Po 
University of Economics, Poland); Arnaud Brun and Jean Michel
Portugal (Orange Labs, France); Jacopo Stalino (Sorbonne
University, France)

XMPP-based Network Management Infrastructure for Agile IoT
Application Deployment and Configuration
Enrico Ferrera, Davide Conzon and Paolo Brizzi (Istituto Superiore
Mario Boella, Italy); Lucas Gomes (Federal University of Pernambuco
& GPRT, Brazil); Marc Jentsch (Fraunhofer Gesellschaft, Germany);
Peeter Kool (CNet Svenska AB, Sweden)

Toward a Distributed Multi-Agents IoT Platform
Karim Saikali and Nicole Boutros Saikali (University Saint Joseph,
Lebanon)

Poster Session 1 – 15:30-16:00 and 18:30-21:00 – Tuesday 1

Edge-of-Cloud Fast-Data Consolidation for the Internet of Things
Gilles Privat, Laurent Lemke, Christophe Azemar, Pascale Borscia
and Marc Capdevielle (Orange Labs, France)
1st workshop on Green Communications Systems
Chair: Noël Crespi (Institut Mines-Telecom, France)

Workshop – 14:00-16:00 – Wednesday 2

ICT energy challenges and forecast
Philippe Richard (Nokia Bell Labs Senior Director, France)

CONVINcE: Towards Performance Optimization in Video Distribution Networks
Adrian Popescu (Blekinge Institute of Technology, Sweden), Raoul Monnier (Thomson Video Networks, France), Rickard Ljung (Sony Mobile, Sweden)

Quality of Experience on Smartphones: Network, Application and Energy Perspectives
Selim Ickin (Ericsson, Sweden) and Markus Fiedler (Blekinge Institute of Technology, Sweden)

Power Aware Media Delivery Platform Based on Containers
Jimmy Kjällman, Miika Komu, Tero Kauppinen (Ericsson, Finland)

Energy Savings for Video Streaming using Fountain Coding
Anders Plymoth (TelHoc AB, USA), Zhi Zhang (Lund University, Sweden)

Cross-layer energy optimization for dynamic video streaming over Wi-Fi
Zhi Zhang, Mehmet Karaca, Farzad Moradi, Bjorn Landfeldt and Saeed Bastani (Lund University, Sweden); Anders Plymoth (Maxentric Technologies, USA); Rickard Ljung (Sony Mobile, Sweden)

Special Session on Digital Platforms Economics and Regulation
Chair: Alain Vallée (Innovation & Regulation in Digital Services Chair, France)

Established companies are today facing new offers or new service delivery models that threaten their margins, their investment capacity, activity, if not ultimately their existence. Digital platforms are imposing new market structures while modifying the business competition rules. How to react toward these new entrants, which in some cases can be both competitors and partners? develop a very own platform? integrate products into a broader offer? rebuild margin to invest in the core business, what most platforms does not intend to do? New economic balances are to be founded…

This special session will help to clarify these issues, by focusing on one side on the economic theory that have explored the issues of two-sided or multi-sided markets for the development of platforms; and on the other side on the new challenges for regulators who must control the exercise of full and fair competition.

Special session – 16:30-17:40 – Wednesday 2

An Economic View
Marc Bourreau (Professor of Economics, Telecom ParisTech, France)

A Regulatory Viewpoint
Philippe Distler (Member of the Executive Board of the French Telecom Regulatory Body – ARCEP, France)
ICIN 2016 Registration

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<th>Registration Fees</th>
<th>Early Bird (On/by 31 Jan)</th>
<th>Regular (After 31 Jan)</th>
<th>On-Site (1/2/3 March)</th>
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<td>Authors</td>
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* All prices are subject to French VAT at the standard rate of 20%

**Discounts**

- See note 1
- See note 2
- See note 3

**Student** 60%

**Author & Co-Author** 20%

**Endorsing Association** 20%

* Discounts are not cumulative
* ICIN is supported by a number of Partner Associations. Corporate members of endorsing associations are entitled to a 20% discount.

**Conference Venue: Orange Labs**

38 - 40, rue du Général Leclerc
92794 Issy Moulinaux Cedex 9
France
Tél : +33 1 45 29 44 44

Your registration fee includes:

- Access to the conference, special session & tutorial
- Proceedings of the conference
- Coffee breaks and lunches

**Cancellation of Conference Participation:**

- Any cancellation must be sent upon written notification only. Any cancellation made after February 1st the fees will be due in total and no reimbursement possible.
- All authors must register before January 15th 2016

Visit www.icin.co.uk for more information
Noël Crespi
Institut Mines-Telecom, France

Prof. Noël Crespi holds Masters degrees from the Universities of Orsay (Paris 11) and Kent (UK), a diplôme d'ingénieur from Telecom ParisTech, a Ph.D and an Habilitation from Paris VI University (Paris-Sorbonne). From 1993 he worked at CLIP, Bouygues Telecom and then at Orange Labs in 1995. He took leading roles in the creation of new services with the successful conception and launch of Orange prepaid service, and in standardisation (from rapporteurship of ITU standard to coordination of all mobile standards activities for Orange). In 1999, he joined Nortel Networks as telephony program manager, architecting core network products for EMEA region. He joined Institut Mines-Telecom in 2002 and is currently professor and Program Director, leading the Service Architecture Lab. He coordinates the standardisation activities for Institut Mines-Telecom at ITU-T, ETSI and 3GPP. He is also an adjunct professor at KAIST, an affiliate professor at Concordia University, and is on the 4-person Scientific Advisory Board of FIW (Austria). He is the scientific director the French-Korean laboratory ILLUMINE. His current research interests are in Service Architectures, Services Webification, Social Networks, and Internet of Things/Services.

http://noelcrespi.wp.tem-tsp.eu/

Alain Vallée
Innovation & Regulation in Digital Services Chair, France

Alain VALLEE spent most of his career in the telecommunications sector. He worked in Telecom operators strategic and regulatory departments in Europe. He also spent five years as head of the economic and forecasting department of the Direction de la Réglementation Générale of the French Ministry of Telecommunications. He did participate to the European Commission works.

He joined TELECOM ParisTech in 2007 as Associate Researcher. He contributed to the launch of the Innovation & Regulation in Digital Services Chair, chairing its Steering Committee.

He received a PhD degree (Management Sciences) from Paris Dauphine University (1980).

Alain Vallée
### International Advisory Board

<table>
<thead>
<tr>
<th>Chairman</th>
<th>Stuart Sharrock</th>
<th>Telemates</th>
<th>UK</th>
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<tr>
<td>Vice-Chairman</td>
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<td>SI</td>
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<td>Secretary</td>
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<td>Nokia</td>
<td>FR</td>
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<td>Members</td>
<td>Heinrich Arnold</td>
<td>Telekom Innovation Laboratories</td>
<td>DE</td>
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<td>Concordia University</td>
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