

**IEEE GLOBECOM 2010**

**Symposium on Selected Areas in  
Communications**

**Leading Co-Chair**

Stefano Bregni, Politecnico di Milano, Italy

**Co-Chairs**

Igor Bisio, University of Genova, Italy

Haitao (Tony) Xia, LSI Corporation, USA

Francisco J. Cañete, Universidad de Malaga, Spain

Linda Doyle, CTVR, Trinity College, University of Dublin, Ireland

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**IEEE GLOBECOM 2010 - Symposium on SAC**

**Track: Satellite and Space Communications**

**Co-Chair**  
Igor Bisio, University of Genoa, ITALY

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**Sponsoring Technical Committees**

Satellite and Space Communications TC (SSC)

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**Co-Chairs**

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**Scope and Motivation**

Recognizing the facts that many of wireless technologies used today are based on the efforts started by satellite communications researchers four decades ago, the right idea properly studied in satellite communications can create a new paradigm in wireless technology.

The Satellite and Space Communications track solicits original and unpublished work not currently under review by any other conference or journal. The focus of this track is targeted at exploring and discussing new technical breakthrough and applications focusing on all aspects related to satellite and space communications.

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**Topics of interest**

**include, but are not limited to**

**Air Interface over Satellite Networks**

- Adaptive coding modulation for satellite communication networks
- Fading countermeasures over satellite networks
- Satellite channel management
- Power and bandwidth allocation solutions over satellite networks
- Emerging standards: DVB-S2, DVB-RCS, IP over Satellite
- RF design for satellite communications
- Spread spectrum and multicarrier techniques for satellite communications
- Software radio for satellite communications

- Phased array for satellite communications

#### **Internetworking, Architecture, Protocols and Applications in Satellite Networks**

- PEP architectures and solutions
- QoS-oriented solutions for DVB-S2, DVB-RCS, IP over satellite
- Satellite gateways optimization algorithms
- Security in satellite and hybrid networks
- New protocols for delay tolerant networks
- Deep-space communications
- Gigabit connectivity via satellite
- Convergence and integration among satellite networks and terrestrial wireless networks
- Satellite technology for mobile services
- Satellite communications and "Digital Divide" issues
- Satellite navigation systems

#### **Control and Algorithms for Satellite Networks**

- Satellite network control and management
- Control architectures and algorithms for satellite and heterogeneous internetworking
- Control schemes for resource allocation over satellite channels
- Satellite communication

#### **New paradigm in Satellite and Space Communications**

- Quantum communication in Space
- Satellite communication using laser
- Satellite/terrestrial frequency sharing

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### **Technical Program Committee (tentative)**

- Giovanni Emanuele Corazza (University of Bologna)
- Alban Duverdier (Centre National D'Etudes Spatiales - CNES)
- Aldo Mendez (Autonomous University of Tamaulipas)
- Alessandro Vanelli-Coralli (University of Bologna)
- Arjan Durrezi (Indiana University Purdue University Indianapolis)
- David Evans (ESA/ESOC)
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- Giuseppe Araniti (University "Mediterranea" of Reggio Calabria)
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- Mauro De Sanctis (University of Rome "Tor Vergata")

- Merkourios Karaliopoulos (ETH Zurich)
- Ning Chen (Freescale Semiconductor)
- Nozomu Nishinaga (National Institute of Information and Communications Technology)
- Periklis Chatzimisios (Alexander TEI of Thessaloniki)
- Petia Todorova (Fraunhofer-FOKUS)
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- Richard Langley (University of New Brunswick)
- Ruhai Wang (Lamar University)
- Salah Eddine Elayoubi (France Telecom R&D)
- Sandro Scalise (German Aerospace Center)
- Shinichi Miyamoto (Osaka University)
- Stephan Olariu (Old Dominion University)
- Takaya Yamazato (Nagoya University)
- Thierry Gayraud (Toulouse University of Science, LAAS-CNRS)

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## Biography of Co-Chairs

### Igor Bisio

Igor Bisio got his "Laurea" degree in 2002 and his Ph.D. degree in "Information and Communication Sciences and Technologies" in 2006 at the University of Genoa. His Ph.D. was funded by the Italian National Consortium of Telecommunications (CNIT). He also collaborates with CNIT since 2002. Since 2006 he is Research Fellow at the Department of Communication, Computer and System Sciences of the University of Genoa and in particular in the Satellite Communications and Networking Group and in the Digital Signal Processing group.

He is author of about 50 papers appeared in Intl. journals and conference proceedings, 1 international patent and he is the recipient of the Best Paper Awards (Physical Comms. Systems) of the IEEE Global Communication Conference 2006 (San Francisco, CA, USA), of the Intl. Workshop on Satellite and Space Communications 2006 (Madrid, Spain) and of the First Intl. Conference on Advances in Satellite and Space Communications 2009 (Colmar, France).

In June 2008 he has been elected Secretary of the IEEE Satellite and Space Communications Technical Committee and he is IEEE member since 2004.

His main research activity concerns: Resource Allocation for Satellite Communication systems, Optimization Algorithms and Architectures for Satellite Sensor Networks, Advanced Controls for Interplanetary Networks and for Heterogeneous Networks, Network Layer performance analysis through simulation, Context Awareness, Smartphone Applications, emulation and trials on the field.

He is currently Publication Chair of the 2nd Intl. Conf. on Personal Satellite Services, TPC Chair of the 3rd Intl. Conf. on Personal Satellite Services and Advisory Chair of the Second Intl. Conf. on Advances in Satellite and Space Communications 2010. He has been Technical Program Committee member also of the following Intl. conferences: IEEE Globecom 2006 (Satellite and Space Communications Symposium), IEEE Globecom 2007 (Wireless Networking Symp.), IEEE ICC 2008 (General Symposium) and IEEE Globecom 2008 (Symp. on Selected Areas in Communications), IEEE Intl. Communications Conference (ICC) 2009, IEEE Globecom 2009 (Symp. on Selected Areas in Communications), IEEE Intl. Communications Conference (ICC) 2010. He is reviewer of many Intl. journals and conferences.

Since 2002 he has been involved in several International and National Research Projects concerning satellite communications and networking and digital signal processing.

**IEEE GLOBECOM 2010 - Symposium on SAC**

**Track: Data Storage**

**Co-Chairs**

Haitao (Tony) Xia, LSI Corporation, USA

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**Sponsoring Technical Committees**

Data Storage (DS)

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**Co-Chairs**

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**Scope and Motivation**

Signal processing and coding have been key component of data storage systems in the past (tape recording, disk drives, CD and DVD players). Recording devices simply do not work without signal processing and coding electronics. Codes and signal processing methods in data storage are unique in the sense that they need to be tailor-made to address issues in data storage: head-disk interfaces, media noise, recording physics, etc. Over the past 5 years, there has been a major shift in signal processing methods for data storage, triggered by two events:

- the shift to perpendicular magnetic recording technology, and
- the penetration of magnetic data storage into consumer electronics (iPods, digital cameras, video recorders, etc.)

As a result, established companies that had not been in the data storage industry in the past are entering this exciting technical area. The data storage track will present a chance for researchers in this community to present the novel approaches for signal processing and coding for data storage.

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**Topics of interest**

**include, but are not limited to**

- Channel characterization, including modeling of media noise and nonlinearity.
- Detection methods, including sequence detection, partial response and decision feedback.
- Modulation and run-length limited codes.
- Error-correcting codes, trellis coding and turbo codes.
- Combined equalization and coding.

- Equalization and filtering, including nonlinear techniques.
- Write precompensation and write equalization.
- Circuit designs for read/write channel electronics and coding / detection algorithms.
- Timing and gain recovery.
- New concepts for perpendicular recording.
- Noise modeling and analysis for perpendicular recording.
- Coding bounds, density, and channel capacity.
- Data compression for digital storage, including audio and video.
- AC-bias or FM linearization techniques.
- Multiple-head systems.
- Signal processing for optical storage systems: holographic, near-field, multi-level, phase change, magneto-optic, CD, DVD.
- Cost versus performance issues surrounding design of signal processing systems for storage
- Coding techniques for disk arrays.
- Special issues surrounding signal processing and coding for removable storage devices.
- Signal processing and coding methods for object based storage systems.
- Data security for storage systems.
- Novel servo coding and formatting.
- Servo Gray code detection and processing.
- System-on-chip (SOC) architecture and optimization.
- Iterative decoding and LDPC codes.
- Efficient error control coding/decoding and LDPC codes for 4K block sectors.
- Measurement, testing, and performance optimization.

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## Technical Program Committee

- J. R. Cruz (University of Oklahoma, USA)
- Alek Kavcic (University of Hawaii, USA)
- Sedat Olcer (IBM Zurich, Switzerland)
- Weni Jin (LSI Corporation, USA)
- Ivana Djurdjevic (Hitachi Global Storage Technologies, USA)
- Paul H. Siegel (University of San Diego, USA)
- Warren Gross (McGill University, Canada)
- Bane Vasic (University of Arizona, USA)
- Lingqi Zeng (Link A Meida Devices, USA)
- Edward K. S. Au (Huawei Technologies, China)
- George Mathew (LSI Corporation, USA)
- Tiffany Jing Li (Lehigh University, USA)
- Bruce Wilson (Hitachi Global Storage Technologies, USA)
- Hua Hu (Tsinghua University, China)

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## Biography of Co-Chairs

### Haitao (Tony) Xia

Dr. Haitao (Tony) Xia received the B.S. and M.S. degrees from Southeast University, Nanjing, China, in 1994 and 1997, respectively. From 1997 to 2000, he was with the Design Institute, Shanghai Telecommunication Company working on GSM/CDMA cellular network design and optimization. He joined Lucent Technologies for a brief period before starting his work toward the Ph.D. degree at the

University of Oklahoma, Norman, USA, in the area of coding and signal processing for magnetic recording channels. Dr. Xia has worked at Link\_A\_Media Devices Corporation for four and half years, and he is currently working at LSI Corporation at Milpitas, California, USA as a senior system architect. His research involves the areas of signal processing and coding in communications systems such as data storage and wireless communications. He has published more than 20 articles in peer-reviewed journals and international conferences. Dr. Xia is an elected officer of IEEE Data Storage Society Technical Committee since 2005, and he has served as Symposium Technical Program Chair and Member in several IEEE international conferences such as IEEE ICC2007, IEEE ICC2009. Dr. Xia is an IEEE Senior Member and Member of Sigma Xi.

**IEEE GLOBECOM 2010 - Symposium on SAC**

**Track: Access and Home Networks**

**Co-Chairs**

Stefano Bregni, Politecnico di Milano, Italy  
Francisco J. Cañete, Universidad de Malaga, Spain

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**Sponsoring Technical Committees**

- Transmission, Access and Optical Systems (TAOS)
- Power Lines Communications (PLC)

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**Co-Chairs**

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**Scope and Motivation**

Access networks and indoor LANs constitute a research area of increasing concern in telecommunications and commercial interests are boosting the development of new systems. There are many applications demanding broadband networking with variable quality of service support like multimedia contents sharing, Voice over Internet Protocol (VoIP), video streaming (conventional and high-definition), IPTV, etc. Different technologies can cooperate for this purpose: wired networks like traditional copper-based telephone lines (xDSL and in-home networks) or coaxial TV distribution lines, power lines (PLC), optical fibers (PONs & AONs), and radio (WLAN, M-LAN & mobile phones). New up-coming international standards like IEEE P1901 ("Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications) and ITU-T G.9960 ("Next generation wire line based home networking transceivers-Foundation") will attract even more attention to this field.



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**Topics of interest  
include, but are not limited to**

**Power Line Communications**

- Channel characterization, measurements and modeling
- Modulation and coding techniques (multi-carrier, spread spectrum, UWB, dynamic spectrum management, adaptive, cognitive, error control, etc.)
- Signal processing (synchronization, detection, equalization, etc.)
- Multiple access techniques and MAC protocols
- Modem and LSI devices design
- Cross-layer optimization
- Information and communication theory
- Networks and protocols
- System architectures
- Access and in-home PLC systems
- In-vehicle power line networks
- AMR and utility applications
- PLC command and control
- Systems co-existence and Interoperability
- Security in PLC
- Experimental systems and field trials
- Electromagnetic compatibility
- Standards and regulatory issues

**Emerging Technologies for Access Networks**

- Emerging technologies for wireless, optical, copper access networks
- Progress in xDSL and copper access
- Cellular concepts
- FTTx and PON technologies, fiber to the home, premise, curb, desktop
- AON and optical Ethernet architectures
- Free space optic LAN-PAN systems
- Long-reach Ethernet over copper
- Access over fiber, copper cable and hybrid network architectures
- Residential gateways, municipal and community networks
- Pervasive access
- Regulatory issues, unbundling of the access network

**Emerging Technologies for Home Networks**

- Emerging technologies, systems and applications for Home Networks
- Smart grids: communication technologies, systems and applications
- Networked appliances for in-home networks
- Home networking: protocols and management
- Routing & Traffic Engineering
- Broadband wireless access and indoor networks (WiFi, WiMax, Wireless local loop)
- Hybrid wireless/wired access and indoor LANs
- Emerging standards and proposals
- System modeling and performance evaluation
- Demonstrators and experimental trials

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## Technical Program Committee

- Andrea Tonello (University of Udine)
- Annamalai Annamalai (Prairie View A&M University)
- Ashwin Gumaste (Indian Institute of Technology)
- Cecilia Galarza (University of Buenos Aires)
- Daisuke Umehara (Kyoto University)
- Gerd Bumiller (iAd GmbH)
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- Hamed Mohsenian-Rad (University of British Columbia )
- John Mitchell (University College London)
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- Junichi Nakagawa (Mitsubishi Electric )
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- Liam Murphy (University College Dublin)
- Lutz Lampe (University of British Columbia)
- Marc Necker (University of Stuttgart)
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- Srinivasa Prasanna (International Institute of Information Technology)
- Stefano Galli (Panasonic)
- Susumu Kinoshita (Fujitsu Laboratories)
- Takamasa Imai (Kanagawa University)
- Tarek El-Bawab (Jackson State University)
- Xavier Fernando (Ryerson University)

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## Biography of Co-Chairs

### Stefano Bregni

Stefano Bregni (M'93-SM'99) is Associate Professor at Politecnico di Milano, where he teaches telecommunications networks and transmission networks. He was born in Milano, Italy, in 1965. In 1990, he graduated in telecommunications engineering at Politecnico di Milano. Since 1991, he worked on SDH and network synchronization issues, with special regard to clock stability measurement, first with SIRTI S.p.A (1991-1993) and then with CEFRIEL consortium (1994-1999). In 1999, he joined Politecnico di Milano as tenured Assistant Professor.

He has been Senior Member of the IEEE since 1999. Since 2004, he has been Distinguished Lecturer of the IEEE Communications Society. He is Director of Education, Chair of the Transmission, Access and Optical Systems (TAOS) Technical Committee and voting member of the Globecom/ICC Technical Content (GITC) committee of the IEEE Communications Society. He is Symposia Chair of IEEE GLOBECOM 2009 and Symposium Chair in ICC 2004, GLOBECOM 2005, ICC 2006, ICC 2007, GLOBECOM 2007, ICC 2008, GLOBECOM 2010. He was TPC Vice-Chair of the IEEE Optical Network Design and Modelling 2005 conference (ONDM 2005). He is Editor of the IEEE ComSoc Global Communications Newsletter and Associate Editor of the IEEE Communications

Surveys and Tutorials Journal. He was tutorial lecturer in IEEE conferences ICC 2000, GLOBECOM 2002, GLOBECOM 2003 and GLOBECOM 2005. He served on ETSI and ITU-T committees on digital network synchronization.

He is author of about 70 papers, mostly in IEEE conferences and journals, and of the books *Synchronization of Digital Telecommunications Networks* (Chichester, UK: John Wiley & Sons, 2002) and *Sistemi di trasmissione PDH e SDH - Multiplazione* (PDH and SDH Transmission Systems – Multiplexing. Milano, Italy: McGraw-Hill, 2004). His current research interests focus mainly on traffic modelling and optical networks.

### **Francisco J. Cañete**

Francisco Javier Cañete received the MS and PhD degrees in Telecommunication Engineering in 1996 and 2004, respectively, from the University of Malaga (Spain). His current research activity is focused on signal processing for digital communications with special interest in channel modeling and transmission techniques for wireless and Power-Line Communication (PLC) systems. In 1996, he worked for the Instrument and Control Department at INITEC (Empresa Nacional de Ingeniería y Tecnología) in the design of power plants. In 1997, he worked for Alcatel España R&D Department in the design of Wireless Local Loop systems. In 1998, he joined the Communication Engineering Department, at the University of Málaga. At present he is an Associate Professor. From 2000 to 2001, he also collaborated with the Nokia System Competence Team in Málaga in the design of Radio Access Networks.

He is author of publications essentially in the field of PLC. He was invited to give a Keynote about Power line channels in IEEE International Symposium on Power Line Communications and Its Applications (ISPLC) in 2007. He has been awarded with the 'Extraordinary Ph.D. Thesis Prize' in 2005, and the 'Juan López de Peñalver Prize' of the University of Malaga to the best research work in the Field of Engineering in 2007.

He collaborates in the organization of several international conferences (ISPLC, Workshop in PLC). He has been TPC member of IEEE ISPLC, GLOBECOM, ICC many years, and reviewer of many IEEE Communications Society journals. He is member of the IEEE ComSoc. Power Line Communication Technical Committee.

**IEEE GLOBECOM 2010 - Symposium on SAC**

**Track: Cognitive Radio & Cognitive  
Networks**

**Co-Chair**

Linda Doyle, CTVR, Trinity College, University of Dublin, Ireland

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**Sponsoring Technical Committees**

Cognitive Networks TC

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**Scope and Motivation**

Cognitive radios based networks, systems, and devices constantly sense the operating environment and adapt their operation. Dynamic spectrum access, RF systems on a chip for computational intelligence, middleware for software based control, adaptive antennas, cooperative networking, etc. are examples of some emerging issues in cognitive radios and networking. Regulator policies, legal and economic issues also play a major role.

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**Topics of interest include, but are not  
limited to**

- Fundamental performance limits of cognitive radio networks
- Spectrum, interference and other network parameter sensing
- Inter-operability and co-existence of heterogeneous wireless networks
- Dynamic spectrum access
- Cognitive MAC, routing, transport and application layer protocols
- Adaptive antennas
- Quality of service issues
- Control theory for adaptive communications
- Modeling, simulation and experimental observations
- Middleware for cognitive radio devices

- Hardware architectures and prototypes
- Software defined radio
- Security issues
- RF systems on a chip
- Spectrum policies and regulatory issues
- Standardization efforts (e.g., IEEE 802.22, IEEE P1900)
- Testbeds
- Economics of cognitive networks
- Applications of cognitive networks (e.g., first responder networks)

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## Technical Program Committee

- Marc Adrat (Frauenhofer FKIE)
- Herve Aiche (Thales Communications)
- Christopher Anderson (United States Naval Academy)
- Huseyin Arslan (University of South Florida)
- Omar Ashagi (Trinity College Dublin)
- Hanna Bogucka (Posnan University of Technology)
- Phillippe Ciblat (ENST)
- Holger Claussen (Bell Labs, Alcatel-Lucent)
- Carlos Cordeiro (Intel Corporation)
- Panagiotis Demestichas (University of Pireaus)
- Octavia Dobre (Memorial University of Newfoundland)
- Oliver Holland (King's College London)
- Friedrich Jondral (Karlsruhe Institute of Technology)
- Irwin Kennedy (Bell Labs, Alcatel-Lucent)
- Eic Klumperink (University of Twente)
- Mieczyslaw Kokar (Northeastern University)
- Georgios Koutsakis (Technical University of Crete)
- Lutz Lampe (University of British Columbia)
- Klaus Moessner (University of Surrey)
- Christophe Moy (Supelec)
- Timothy Newman (Virginia Tech)
- Keith Nolan (Trinity College Dublin)
- Ser Wah Oh (Institute for Infocomm Research)
- Menguc Oner (Isik University)
- Baris Ozgul (Trinity College Dublin)
- Przemyslaw Pawelczak (UCLA)
- Jorge Pereira (European Commission)
- Radoslaw Piesiewicz (Create-Net)
- Robert Schober (University of British Columbia)
- Shamik Sengupta (NYU)
- Claudio Silva (Virginia tech)
- Chad Spooner (Northeast Research Associates)
- Will Stewart (Ofcom UK)
- Paul Sutton (Trinity College Dublin)
- Hwee Pink Tan (Institute for Inforcomm research)
- I-Jen Wang (John Hopkins University Applied Physics Lab)
- Xianbin Wang ( University of Western Ontario)

- Tricia Wilink (Communications Research Centre)
- Daniel Wilkomm (TU-Berlin)
- Yonghong Zeng (Institute for Inforcomm research)

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## Biography of Co-Chairs

### Linda Doyle

Linda Doyle is an Associate Professor in Trinity College, University of Dublin in the Department of Electronic & Electrical Engineering. Prof. Doyle received her Ph.D. in 1996 and has been a faculty member since then. She leads a large research group in CTVR. CTVR is a national research group based in Ireland that focuses on telecommunication systems of the future with a large number of actively engaged industry partners. In particular Prof. Doyle' team of 25 researchers works on wireless networking, cognitive radio, reconfigurable networks, dynamic spectrum access, spectrum trading and spectrum regulation.

Prof. Doyle is highly active in the field of cognitive radio. She currently is vice-chair of the IEEE Technical Committee on Cognitive Networks. She has just written a book on "The Essentials of Cognitive Radio" published by Cambridge University Press. Prof. Doyle has also played a role in spectrum policy at a national level and has been involved with the Irish Department of Communications in writing a white paper on spectrum policy for Ireland. She has recently become a member of the Ofcom Spectrum Advisory Board in the UK.

**IEEE GLOBECOM 2010 - Symposium on SAC**

**Track: Other Related Technologies**

**Feature Topics:**

**Vehicular Communications Networks and Systems  
Situation Management in Communications**

**Feature-Topic Vice-Chairs**

Sidi Mohammed Senouci, Orange Labs, France (VCNS)  
Gabriel Jakobson, Altusys Corporation, USA (SMC)

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**Sponsoring Technical Committees**

All TCs

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**Feature-Topic Vice-Chairs**

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**Scope and Motivation**

Paper on all communications topics, not covered in other symposia and SAC tracks, are welcome in this general track of the SAC symposium. In particular, papers are called about the following feature topics.

**Vehicular communication networks and systems**

Vehicular communication networks and systems are becoming more and more popular. Based on short-range and medium-range communication as well as on cellular systems, vehicular networks have been identified as a key technology for increasing road safety and transport efficiency, and providing Internet access on the move to ensure wireless ubiquitous connectivity. This new kind of wireless networks presents a very active field of research, development, standardization, and field

trials aiming the creation of high-performance, highly reliable, highly scalable, secure, and privacy-preserving vehicular networks.

### **Situation Management in Communications**

Situation Management is new discipline which is driven by the intersecting advances of sensor networks, real-time event management, and knowledge-based situation awareness. The goal of Situation Management is to form information-rich real-time pictures of operational theatres such as needed in homeland security, disaster recovery, cyber security, and network centric warfare. These pictures are developed as a set of situations that are built from large-scale real-time data sources, rich models, and intelligent analysis.

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### **Topics of interest**

**include, but are not limited to**

#### **Vehicular communication networks and systems**

- Vehicular Communications
- Inter-Vehicle Applications
- In-Vehicle Applications
- Vehicle to Roadside Applications
- Interoperability and gateways to Internet, mesh networks, or 3G networks
- Interworking with sensor network technologies and data collection
- Architectures and protocols design
- Networking protocols and their evaluation
- QoS and cross-layer optimization design
- Security, privacy and liability
- Scalability issues in metropolitan-wide vehicular networks
- MAC and PHY Layers for In-Vehicle and Inter-Vehicle communications
- Mobility and vehicle traffic models
- Standards development, business models, policies, market introduction and penetration
- Real-world testbeds, Field operational testing (FOT) and Simulation platforms
- Digital maps and location technologies
- Human-Machine Interface

#### **Situation Management in Communications**

- Situation Awareness and Decision Support
  - Situation monitoring and control
  - Situation modeling, reasoning and decision support
  - Predictive situation modeling
  - Situation ontology and semantics
  - Formal methods and situation calculus
  - Learning and situation discovery
- Intelligent Sensing
  - Intelligent sensing and sensor networks
  - Semantic sensor web
  - Context-aware and reflective sensing
  - Sensor discovery and distributed sensor localization techniques
  - Biology-inspired, autonomic and self-organizing sensing
- High-Level Information Fusion



- Multi-source, multi-resolution and hierarchical information fusion
- High-level models of information fusion
- Information fusion and situation awareness
- Situation Management Architectures
  - Multi-agent systems and distributed situation management
  - Collaborative models of situation management
  - Peer-to-peer architectures for situation awareness
- Situation Management Applications
  - Cyber Network Security Situation analysis, cyber attack Impact assessment and threat prediction
  - Situation monitoring and control in asymmetric, net-centric and tactical battlespace operations
  - Earth observations, disaster response and emergency situation management
  - Situation management in Intelligent transportation and health care

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## Technical Program Committee

### Vehicular communication networks and systems

- Nadjib Achir, University of Paris 13, France
- Mosa Ali Abu-Rgheef, Plymouth University, UK
- André-Luc Beylot, ENSEEIHT, France
- Khaled Boussetta, University of Paris 13, France
- Joaquim Celestino JR., State University of Ceará (UECE), Brazil
- Wai Chen, Telcordia Technologies, USA
- Soumaya Cherkaoui, University of Sherbrooke, Canada
- Andrea Conti, University of Bologna, Italy
- Jean-Pierre Ebert IHP, Microelectronics, Germany
- Eylem Ekici, Ohio State University, US
- Javier Gozalvez, University Miguel Hernandez, Spain
- Jérôme Haerri, University of Karlsruhe, Germany
- Abdelhakim Hafid, University of Montreal, Canada
- Hannes Hartenstein, Karlsruhe University, Germany
- Djamel Khadraoui, Centre Henri TUDOR, Luxembourg
- Martin Mauve, Heinrich Heine University Düsseldorf
- Hamid Nafaa, UCD, Ireland
- Sooksan Panichpapiboon, King Mongkut's Institute of Technology, Thailand
- Joel Rodrigues, University of Beira Interior, Portugal
- Paolo Santi, CNR, Italy
- Raja Sengupta, Univ. of California Berkeley
- Ahmed Toufik, LABRI, ENSEIRB, France
- Celeste Campo, Vazquez University Carlos III, Madrid, Spain
- Rolland Vida, Budapest University of Technology and Economics, Budapest, Hungary
- Guang Yang, Nokia Research Center, USA
- Luis Costa, Universidade Federal do Rio de Janeiro, Brazil
- Tzung-Shi Chen, National University of Tainan
- Chih-Yung Chang, Tamkang University, Taiwan
- Daniel Wong, Malaysia University of Science and Technology, Malaysia
- Wilfried Elmenreich, University of Klagenfurt, Austria
- Pietro Manzoni, Universidad Politécnica de Valencia, Spain
- Yuh-Shyan Chen, National Taipei University, Taiwan

- Pedro M. Ruiz Martinez, University of Murcia, Spain
- Vinuth Rai, Toyota ITC, USA
- Jaafar Elmirghani, University of Leeds, UK
- Bertrand Ducourthial, University of Technology of Compiègne, France
- Tamer Nadeem, Siemens Corporate Research, US
- Rajeev Shorey, General Motors, India
- Timo Kosch, BMW, Germany
- Yacine Ghmari-Doudane, ENSIIE, France

#### **Situation Management in Communications**

- Serge Chaumette, University Bordeaux, France
- Hasan Davulcu, Arizona State University, USA
- Gabi Dreo, University of Federal Armed Forces, Germany
- Mohamed Eltoweissy, Virginia Tech, USA
- Mica Endsley, SA Technologies
- Monica Farah-Stapleton, CERDEC, USA
- Frank Fiedrich, ICDRM, George Washington University, USA
- Rajeev Gopal, Hughes Network Systems, USA
- James Joshi, University of Pittsburgh, USA
- Anssi Karkkainen, University of Helsinki, Finland
- Mieczyslaw Kokar, Northeastern University, USA
- Dale Lambert, DSTO, Australia
- Lundy Lewis, SNHU, USA
- Peeter Lorents, NATO Cyber Defense Center, Estonia
- Li Li, Communications Research Center Canada, Canada
- Leo Motus, TTU, Estonia
- Kelly Reyn, FGAN, Germany
- Brad Rhodes, BAE Systems, USA
- Paul Smart, U Southhampton, UK
- Per Svensson, Swedish Defense Research Agency, Sweden

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## **Biography of Vice-Chairs**

### **Sidi Mohammed Senouci**

Sidi Mohammed Senouci received in 1999 the M.S. degree from the University of Paris 13, France. In 2003 he obtained the Ph.D. degree in computer networks from the University of the Pierre & Marie Curie, Paris 6. From 2002 to 2004, he was an associate lecturer at the University of Cergy-Pontoise, France.

From December 2004, he is Senior Research Scientist in France Telecom R&D (Orange Labs) Lannion. He is the project leader of different Orange projects and involved in different French and European projects dealing with spontaneous, pervasive and vehicular networks.

His current research interests include Vehicular Communications, Ad hoc and Sensor Networks, TCP over Wireless, Wireless and Mesh Networks, Cooperative Networks, Performance evaluation. He holds 6 international patents on these topics and published his work in major IEEE conferences (ICC, Globecom, PIMRC, WCNC, NOMS, VTC) and renowned journals. He was the founding Chair of Ubiroads2007 workshop (collocated with IEEE GIIS2007), and TPC co-chair of VehiCom2009 Workshop (associated with IEEE IWCMC'2009). He was the editor of a special issue of UBICC journal on Ubiquitous Roads and was the special track co-chair of PIMRC08 on Intelligent

Transportation and Traffic Telematics - Challenges, Applications, and Standardization. He is founding co-editor of the IEEE ComSoc Ad Hoc and Sensor Network Technical Committee (AHSN TC) Newsletter. He also acted or still acts as TPC member of the following IFIP, ACM or IEEE conferences and workshops (ICC, GLOBECOM, PIMRC, GIIS, VTC, WiVeC, MWCN, IWWAN, Wireless Days, WITS). He is a Member of IEEE and the Communications Society and Expert Senior of the French society SEE (Society of Electricity and Electronics).

### **Gabriel Jakobson**

Dr. Gabriel Jakobson is the Chief Scientist at Altusys Corp., a consulting firm specializing in the development of intelligent Situation Management technologies for defence, cyber security and disaster situation management applications. During his more than 20 years tenure at Verizon (formerly GTE) he had increasing responsibilities of leading advanced database, expert systems, artificial intelligence, and telecommunication network management programs. Prior to that he was Senior Researcher at Institute of Cybernetics, Tallinn, Estonia conducting research on knowledge-based systems. Dr. Jakobson has authored over 100 technical publications, has awarded 4 US patents on innovative real-time event correlation methods, and has 4 US patents pending on situation management. He received PhD degree in Computer Science from the Institute of Cybernetics, Estonia.

His current research interests include real-time distributed multi-agent systems, situation awareness and decision support, spatio-temporal reasoning, event correlations, disaster situation management, cyber attack impact assessment and threat prediction. Dr. Jakobson holds the honorary degree of Doctor Honoris Causa from the Tallinn Technical University, Estonia, and is Distinguished IEEE ComSoc Lecturer. He is the chair of the Workshop on Situation Management SIMA held in-conjunction with MILCOM 2005-2009, chair of the Special Sessions on Situation Management at International Conference of Information Fusion 2006-2008, TPC co-chair of the Symposium on Selected Areas of Communication at ICC 2009 and General Chair of the International Conferences of Enterprise Networking and Services (EntNet) 2002-2007. Dr. Jakobson is the vice-chair of the Tactical Communications and Operations Technical Committee of IEEE ComSoc, chair of the IEEE ComSoc Sub-Committee on Situation Management, IEEE ComSoc Board member and Director of North America Region of ComSoc.