



# The 11th ICITST-2016

December 5-7  
Barcelona, Spain

## Programme Handbook

### Sponsors and Collaborators



**The 11th International Conference for Internet Technology and Secured Transactions  
(ICITST-2016)**

**Catalonia Barcelona Plaza Hotel**

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## **Welcome Message**

Welcome to the 11th International Conference for Internet Technology and Secured Transactions (ICITST-2016), which is hosted this year at the Catalonia Barcelona Plaza Hotel in Barcelona, Spain. The ICITST event series seeks to bridge the knowledge gap between academia and industry, promote research esteem in secured Internet transactions and the importance of information technology evolution to secured transactions.

The 2016 event invited research papers encompassing conceptual analysis, design implementation and performance evaluation, and received a total of 447 paper submissions. After the peer review we accepted 127 papers, 4 posters out of 19, 1 special session and 2 workshops. The double-blind paper evaluation method was adopted to evaluate each of the conferences submissions. Please note that selected papers will be invited for publications in a number of high impact International Journals.

Many people have worked very hard to make this conference possible, and we would like to extend our thanks to all who have helped in making it a success. First and foremost we would like to thank the authors who have contributed their work and given us a varied and high-quality programme as a result. Special thanks are also due to our Keynote Speakers - Martin Visser, Dr Jorge Lopez Hernandez-Ardieta, Professor Oscar Corcho, and Sandra Stincic Clarke - for agreeing to participate, as well as to our IEEE Spain Section Professional Activities invited speaker, Dr Carles Antón-Haro. Various thanks are also owed to those that have worked to organise and support the event, and the Steering Committee members and our numerous reviewers all deserve credit for their contributions in this respect. We would like to acknowledge our technical co-sponsorship from the IEEE, and in particular the support of the IEEE Spanish Section and IEEE Spanish Computer Chapter. Thanks are also due to the Infonomics Society for the overall organisational efforts to ensure the promotion and staging of the event.

We wish you a pleasant stay in Barcelona, and hope that you will be able to use the opportunity to meet and exchange ideas with other colleagues. We would like to encourage all attendees to contribute to the future of the ICITST conference series as authors, speakers, panellists, and volunteer conference organisers.

Thank you again for your attendance and support.

### **General Chair**

Steve Furnell, Plymouth University, UK

### **Steering Committee Chair**

Charles A. Shoniregun, Infonomics Society, UK and Ireland

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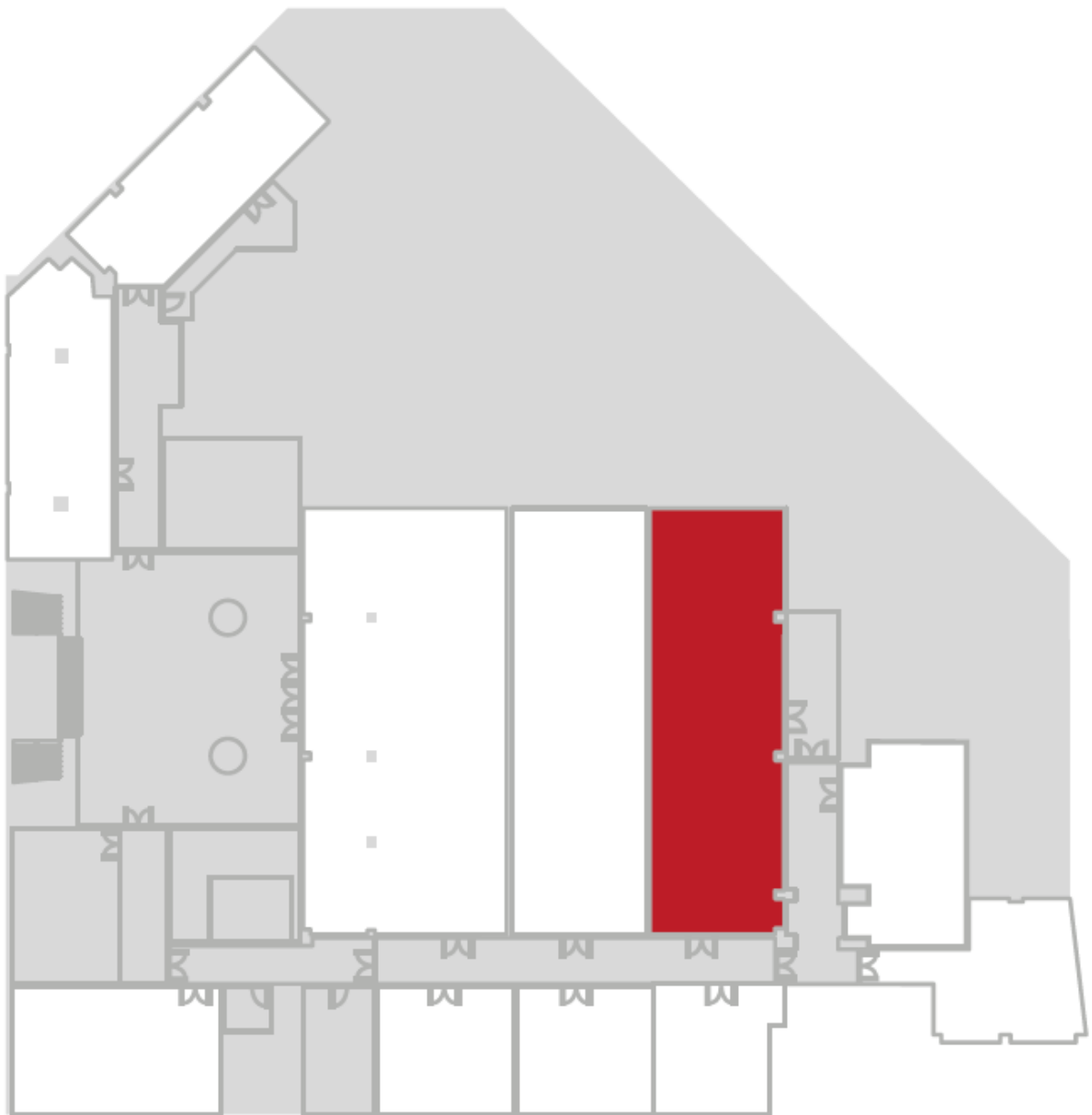
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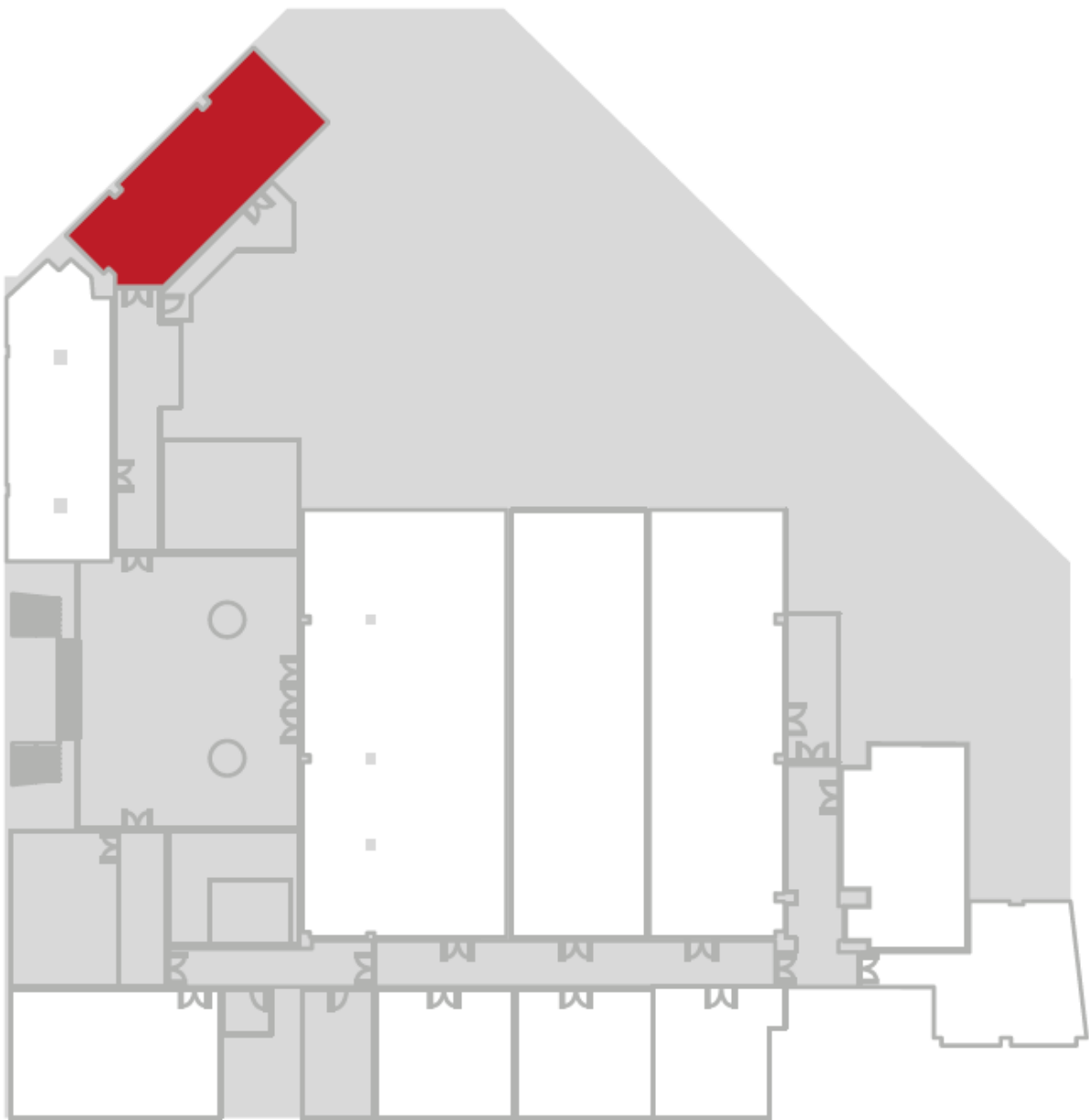
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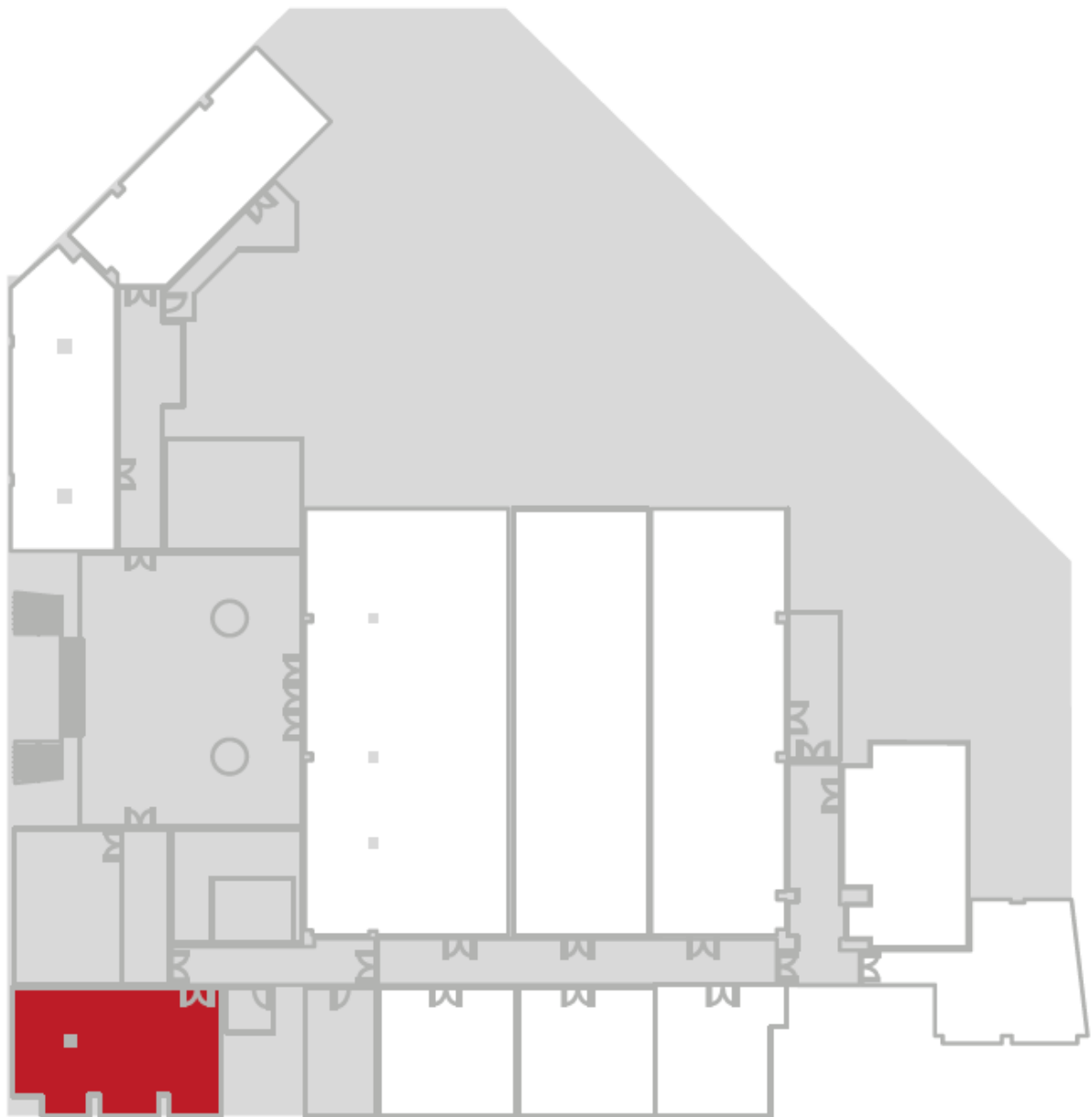
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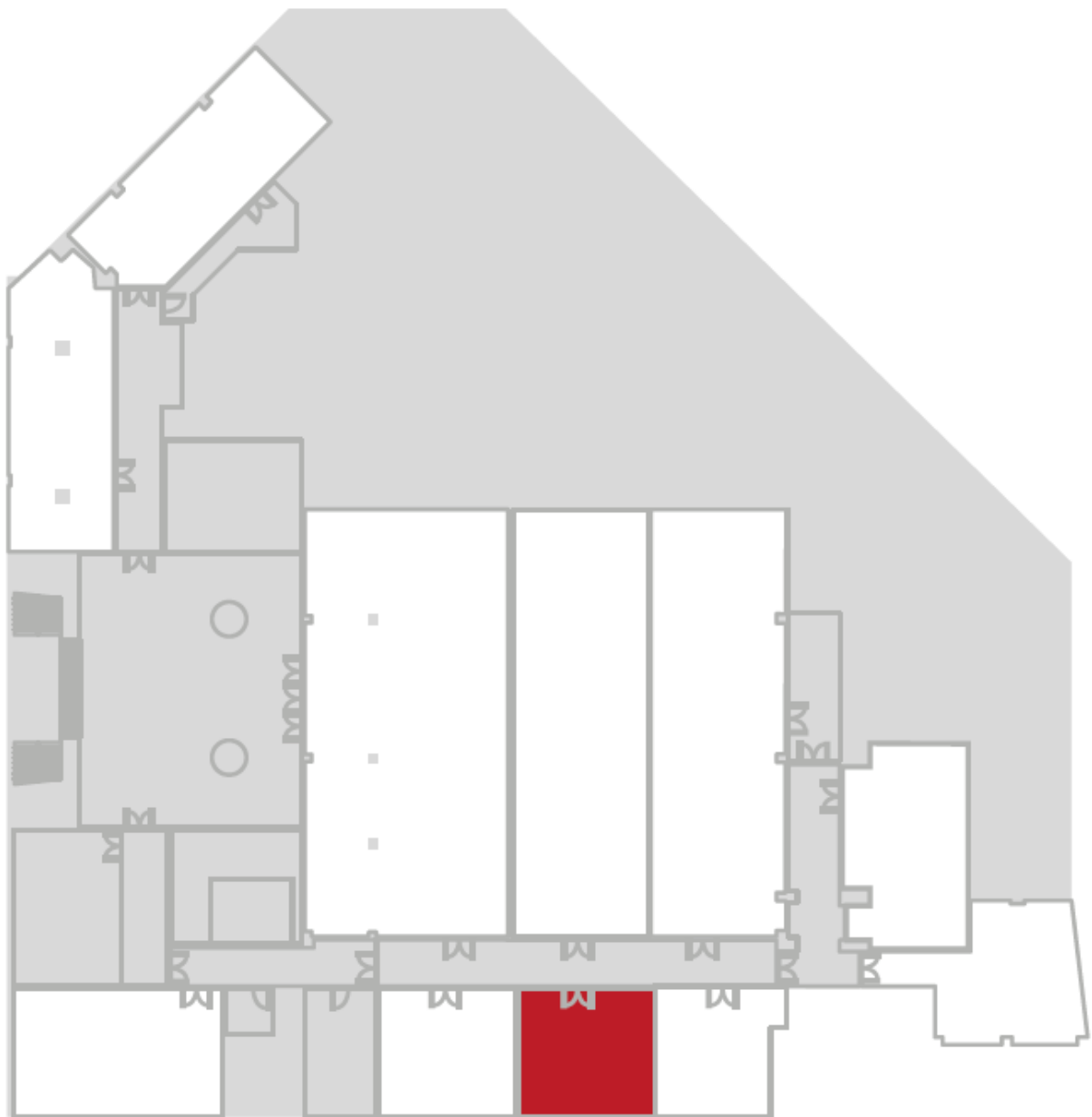
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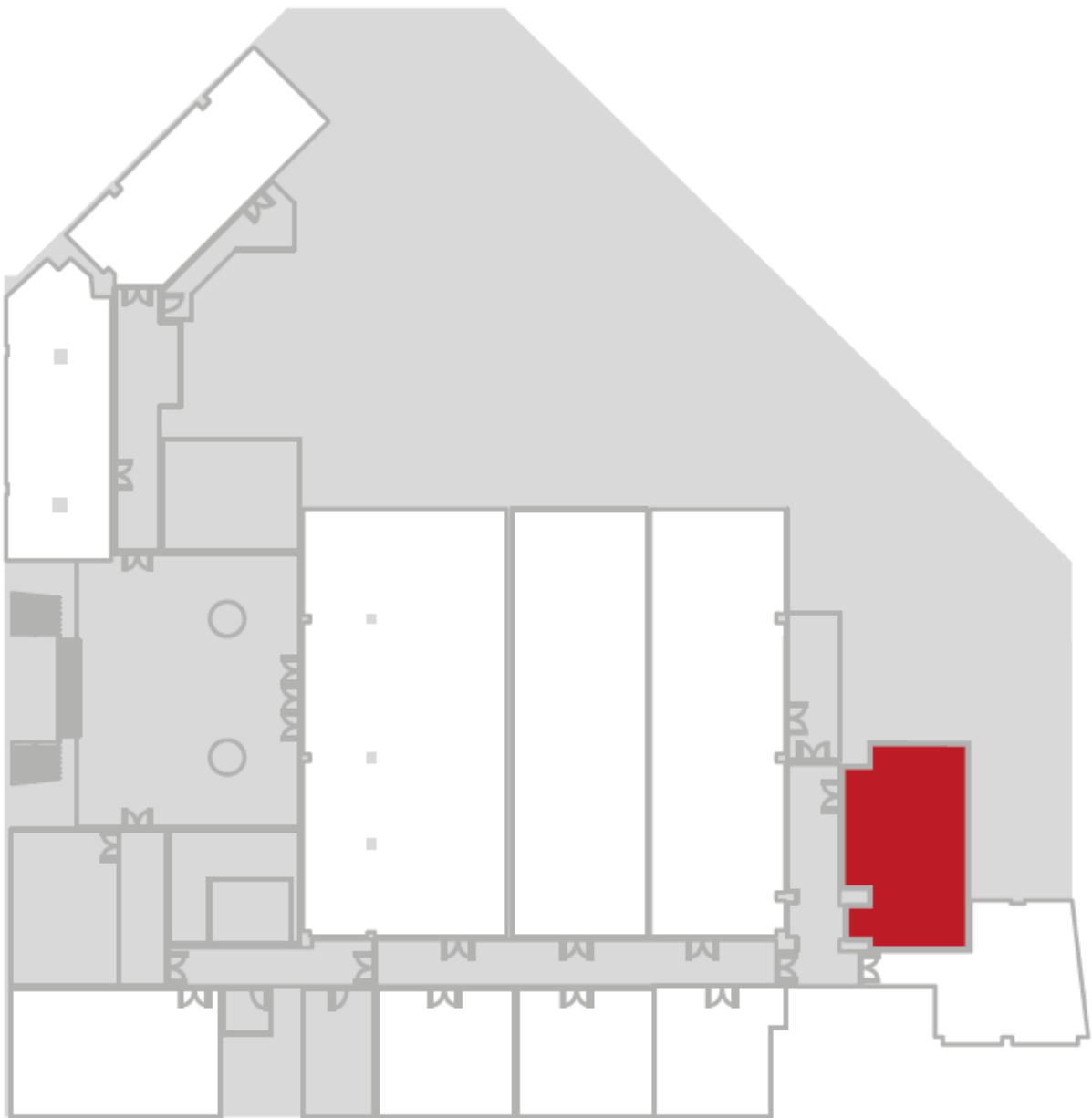


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## **Keynote Speakers**

## Keynote Speaker 1



Martin Visser has over 35 years of experience in the Industrial Control Systems (ICS) environment. From engineer, process information expert, project leader and ICS consultant to Security Officer Industrial Control Systems. Martin has worked for Waternet for more than 30 years. For the last 10 years, Martin was responsible for the security of the entire ICS architecture, Supervisory Control And Data Acquisition (SCADA) and Programmable Logic Controller (PLC) systems of Waternet. His work consisted of drawing up security policies, conducting risk and GAP analysis and assessments. Compiling and executing security awareness training programs and giving ICS advisories. Providing ICS security presentations at home and abroad. From 2006 Martin have been the vice chairman of the Dutch Water-ISAC. In addition he was ICS security consultant for the Dutch association of Drinking Water Companies and Dutch Waterboards and regularly attended ministerial ICS security working groups. Martin have been member of the security working group of the WIB (International Instrument User's Association). The WIB is the founder of the IEC62443-2-4 norm that describes the baseline security standards and certification for ICS suppliers. In August 2015 Martin voluntarily resigned from Waternet. At the same time he founded BeeCA, Bee Cyber Aware, Consultancy to continue my challenging and interesting cyber security work. BeeCA is an advisory and consultancy office in Cyber security, Cyber awareness and Information security for SCADA, ICS, PLC and Operational Technology (OT). As ICS expert/consultant Martin have a strong focus on cyber security for all aspects of Industrial Control Systems in critical infrastructures (utility, drinking- and sewage water, energy).

**Title:** Critical Infrastructures SMART ready?

**Abstract:** The EU initiatives for Research and Innovation for excellent science, competitive industries and a better society together with the new Industry possibilities from Internet of Things and SMART technology putting the Critical Infrastructures in addition to the advantages also for technical, organizational and Industrial Control Systems security challenges. In this keynote I will highlight all these parts as well as the cyber risks and threats in relation to the social responsibility, disruption and economical damage. To complete the keynote I will give some key points to take away and think back over again after returning to your institutions or businesses.

## Keynote Speaker 2



Dr Jorge Lopez Hernandez-Ardieta holds a BSc and MSc in Computer Engineering from the University Autonoma of Madrid, and a PhD in Computer Science from the University Carlos III of Madrid (UC3M). Dr Lopez has been the Head of the Cybersecurity Research Group at Indra, later Head of Product Innovation at Minsait, a special business unit in Indra. He is now Head of Business Solutions, being in charge of conceptualizing innovative cybersecurity solutions, ensuring their novelty and suitability from a technological and business perspectives. To this end he also coordinates prototyping efforts as well as defines cooperation strategies with the academia and other partners. He has also been appointed Cybersecurity Specialist, acting as subject matter expert at Indra. Dr López is an active researcher and is involved in many teaching activities. He is Adjunct Professor and Affiliate Researcher in the Computer Security Lab at the UC3M, where he teaches cryptography and computer security. He also participates in standardisation efforts and high-level consultancy at international level, being a member of working groups in the European Defence Agency, ISO/IEC SC27, the European Committee for Standardization (CEN), the European Cybersecurity Organisation (ECISO) and the NIS Platform. Dr López is a member of IEEE since 2008.

**Title:** Cyber Ranges: The (R)evolution in Cybersecurity Training

**Abstract:** The consolidation of cyber threats as a primary concern of governments, the industry and society in general along with the ever increasing diversity and complexity of technology lie behind the recent explosion in the demand for highly skilled and trained cybersecurity professionals. In regard to this, much effort has been expended and many initiatives have been pursued in recent years, both from academia (e.g. graduate and postgraduate specialisations), industry (e.g. professional certifications, training programmes, technological training platforms) and governments (e.g. standardisation of training curricula, joint education and training programmes at international level). In spite of this, the reality shows that the number of proficient cybersecurity professionals produced is still lagging behind the actual needs and, contrary to what may be expected, the situation is getting worse.

In this talk we will introduce and analyse the key challenges that we observe in cybersecurity training, that require an urgent response if we want to redress the imbalance between the offer and demand for cybersecurity professionals. Amongst these challenges we find issues such as cost-effective hands-on training, specialisation diversity, entry knowledge barriers, flexibility for organisations with high rates of staff rotation, continuous training, and rapid adaptation to new threats and the evolution of technology.

Traditional cybersecurity training platforms, such as those supporting individual computer-based training or e-learning, have long been the only way to implement training programmes in cybersecurity. More recently, the introduction of cyber ranges has redefined how cybersecurity training is to be approached. A cyber range is a virtual environment typically built on top of standard hardware that is used for hands-on training, experimentation, test and research in cybersecurity, and that is intended to support multitenant activities. Cyber range solutions are gaining attention as a key ally to support cost-effective training programmes in different civil and military contexts. Actually, during the last few years a number of cyber ranges for

cybersecurity training have been developed, both from the academy and the industry, as a response to meet the market demand.

However, the results of a market analysis performed by the authors show that current cyber ranges still present limitations that leave most of the aforementioned challenges unanswered. Consequently, there is still an urgent need for innovating new approaches that solve the open problems. In particular, we will explore advanced technical capabilities that could be incorporated into cyber ranges, and that eventually may help to turn around the current offer-and-demand problematic situation.

To conclude, we will share some thoughts based on our practical experience, gained after years of R&D on the topic and hundreds of hours of training in our Cyber Range.



## Keynote Speaker 3



Oscar Corcho is a Full Professor at Departamento de Inteligencia Artificial (Facultad de Informática, Universidad Politécnica de Madrid), and he belongs to the Ontology Engineering Group. His research activities are focused on Semantic e-Science and Real World Internet, although he also works in the more general areas of Semantic Web and Ontological Engineering. In these areas, he has participated in a number of EU projects (DrInventor, Wf4Ever, PlanetData, SemsorGrid4Env, ADMIRE, OntoGrid, Esperonto, Knowledge Web and OntoWeb), and Spanish R&D projects (CENITS mIO!, España

Virtual and Buscamedia, myBigData, GeoBuddies), and has also participated in privately-funded projects like ICPS (International Classification of Patient Safety), funded by the World Health Organisation, and HALO, funded by Vulcan Inc. Previously, he worked as a Marie Curie research fellow at the University of Manchester, and was a research manager at iSOCO. He holds a degree in Computer Science, an MSc in Software Engineering and a PhD in Computational Science and Artificial Intelligence from UPM. He was awarded the Third National Award by the Spanish Ministry of Education in 2001. He has published several books, from which "Ontological Engineering" can be highlighted as it is being used as a reference book in a good number of university lectures worldwide, and more than 100 papers in journals, conferences and workshops. He usually participates in the organisation or in the programme committees of relevant international conferences and workshops.

**Title:** Open Data city portals: working towards their homogeneisation

**Abstract:** Existing EU directives and national laws on the reuse of Public Sector Information have motivated the creation of a large set of open data portals across Europe (following a global worldwide trend towards openness in the publication of open data). This is also the case in Spain, where the national government and national agencies, as well as regional governments and institutions, and local city councils, have started publishing actively open data in their corresponding portals. However, this wealth of data has been generated in a bottom up fashion, what means that the selection of the datasets to be published is done by those publishers independently, and that the formats and data structures in which such datasets are available are generally very heterogeneous. This generates problems for those companies and individuals who want to reuse such data across several institutions. In this talk we will present the work that has been done in the context of one of the Spanish normalization working groups towards the definition of an open data maturity model for cities and for the selection of a set often datasets to be published by cities, and which is now being extended to handle many more datasets under the OjoAIData100 initiative.

## Keynote Speaker 4



Sandra Stincic Clarke is Principal Researcher in British Telecommunications' Future Business Technology research practice, where her work is focussed mainly on the Internet of Things space. Her research interests include Internet of Things, Semantic Technology, Distributed Systems and Web Services and their industrial application. She also has a significant expertise in sensor related technologies and IOT transport applications. Sandra has a number of publications in her areas of interest and holds a Master's degree in Electrical Engineering and Computing from University of Zagreb. She

provides thought leadership on IoT technologies to BT and has been involved in a number of large collaborative research programmes with national, EU and international funding, most recently managing BT's contribution to the CityVerve project. She has won several industry awards for her work on IOT and smart cities.

**Title:** Data Silos of the IoT kind

**Abstract:** As Internet of Things sensor deployments reach lower cost, instrumenting the world is possible to a far greater extent. Near real time data collection (often known as The Internet of Things, IoT) is anticipated to deliver significant innovation in many different areas. There is increasing recognition of the potential value in opening up information resources so that they can be exploited more fully. This keynote explores different challenges in IoT Ecosystems, from the perspectives of Information Provider, Information Consumer, and perhaps most challenging, the Information Broker.

## Invited Speaker (IEEE Spain Section Professional Activities)



Carles Antón-Haro holds a PhD degree from the Technical University of Catalonia (UPC) (1998, cum-laude) and an MBA from EADA Business School (2014, Honors). He was a Research Assistant/Associate (1994-1999) at UPC, and Regional Coordinator for 2G/3G cellular network roll-out at Ericsson Radio Spain S.A. (2000). Currently, he is with the Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) as a Director of R&D Programs and Senior Research Associate. Since 2001, he has promoted or coordinated over 60 R&D projects or proposals and has been directly involved in some of them (P2P SmartTest, NEWCOM#, EXALTED, eCROPS, ADVANTAGE, WINNER, to name a few). For 12 years, he also coordinated the recruitment process of +70 research and engineering positions offered by the CTTC.

**Title:** Scientific Resumes and Job Interviews - How to make (a positive) impact

**Abstract:** Preparing a high-impact resume and elaborating optimal strategies for a job interview are essential for a successful career development. Besides, scientific resumes and job interviews in the R&D sector are remarkably different from those in other sectors. This talk is aimed to (i) outline the main differences between scientific and non-scientific resumes and job interviews; (ii) provide guidance on how to effectively organize and present information in a scientific resume; (iii) share tips and tricks for the elaboration of high-impact motivation and recommendation letters; (iv) discuss the main elements, recurrent questions and activities in a job interview; and, finally, (v) discuss strategies for the preparation of a successful job interview. This talk can be particularly relevant for researchers in initial stages of their careers, but not only since seeking new employment opportunities is, very often, a life-time activity.

## **Programme**

## Monday, 5 December 2016

7:30 – 12:00	Registration
8:40 – 9:00	Opening Ceremony
9:00 – 10:00	Keynote Speaker: Professor Oscar Corcho (Room: Barcelona C)
10:00 – 10:20	Coffee Break and Networking
10:20 – 11:20	IEEE Spain Section Professional Activities Invited Speaker: Dr Carles Antón-Haro (Room: Barcelona C)
11:20 – 11:30	Coffee Break and Networking
11:30 – 13:00	Special Session and Sessions
13:00 – 14:00	Lunch
14:00 – 15:30	Sessions and Workshops
15:30 – 15:45	Networking
15:45 – 17:15	Sessions and Workshops

Room	Plaza 5	Plaza 1	Plaza 8	Barcelona C
Time	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes
Session Title	Special Session "Chaos-Data Protection and Hiding in Multimedia Communications, C-DPH-MC"	Session 1 Information Security	Session 2 Cyber Security	Session 3 Cloud Security
Chair(s)	Safwan El Assad	Daniel Fischer	Alberto Caponi	Antonis Michalas
11:30 – 13:00	<p>ID 25 Title: Robust Chaos-based Stream-Cipher for Secure Public Communication Channels (Authors: Ons Jallouli, Safwan El Assad, Maryline Chetto)</p> <p>ID 61 Title: A low-distortion QR code watermarking scheme for digital color images robust to gamma correction attack (Authors: Cynthia Lizbeth Guzman-Candelario, Jose Juan Garcia-Hernandez, Loreto Gonzalez-Hernandez)</p> <p>ID 64 Title: Key requirements for the design of robust chaotic PRNG (Authors: Oleg Garasym, Ina Taralova, René Lozi)</p> <p>ID 65 Title: A commercial application of a chaos-based-stream cipher: Performance and Security analysis (Authors: Gerard Vidal, Rabei Becheikh, Rhouma Rhouma, Safya Belghith)</p>	<p>ID 26 Title: Smartphone's Hotspot Security Issues and Challenges (Authors: Al Harthy Khoula, Nazaraf Shah, Arun N.S. Shankarappa)</p> <p>ID 33 [Virtual] Title: Compressive Sensing Encryption Modes and their Security (Authors: Robin Fay, Christoph Ruland)</p> <p>ID 99 [Virtual] Title: Efficient Biometric-Based Encryption for Fingerprints (Author: Neyire Deniz Sarier)</p> <p>ID 103 Title: An Adaptive Security Framework with Extensible Computational Complexity for Cipher Systems (Authors: Prathap Siddavaatam, Reza Sedaghat, Min Hsuan Cheng)</p>	<p>ID 31 Title: Formal Security Assessment of Modbus Protocol (Authors: Roberto Nardone, Ricardo J. Rodriguez, Stefano Marrone)</p> <p>ID 43 [Virtual] Title: Security Analysis of Forwarding Strategies in Network Time Measurements Using Openflow (Authors: Alex M. S. Orozco, Charles V. Neu, Regio A. Michelin, Avelino F. Zorzo)</p> <p>ID 88 Title: A Survey of Cyber-Security Awareness in Saudi Arabia (Authors: Faisal Alotaibi, Steven Furnell, Ingo Stengel, Maria Papadaki)</p> <p>ID 131 Title: Facing Lateral Movements Using Widespread Behavioral Probes (Authors: Alessandro Greco, Alberto Caponi, Giuseppe Bianchi)</p>	<p>ID 93 Title: Private Information Retrieval and Searchable Encryption for Privacy-Preserving Multi-Client Cloud Auditing (Authors: Louis Tajan, Dirk Westhoff, Christian A. Reuter, Frederik Armknecht)</p> <p>ID 69 [Virtual] Title: Range Query Integrity in the Cloud: the Case of Video Surveillance (Authors: Francesco Buccafurri, Gianluca Lax, Serena Nicolazzo, Antonino Nocera)</p> <p>ID 67 [Virtual] Title: Secure Cloud Distributed File System (Authors: Kheng Kok Mar, ZhengQing Hu, Chee Yong Law, Meifen Wang)</p> <p>ID 68 Title: Data Sharing in the Rain: Secure and Efficient Data Sharing for the Cloud (Author: Antonis Michalas)</p>

## Monday, 5 December 2016

Room	Plaza 5	Plaza 1	Plaza 8	Barcelona C
Time	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes
Session Title	Workshop 1 Cloud Applications and Security (CAS'16)	Session 4 Information Security	Session 5 Internet Application and Technology	Session 6 Cyber Security
Chair(s)	Ella Pereira, Michael Mackay	Asad Khattak	Murizah Kassim	Jarkko Kuusijärvi
14:00 – 15:30	<p>ID 44 Title: Anonymous Authentication Scheme in e-Health Cloud environment (Authors: Amina Djellalbia, Nadjib Badache, Souad Benmeziane, Sihem Bensimessaoud)</p> <p>ID 111 Title: Data Privacy Concerns Involving Cloud (Author: S. Srinivasan)</p> <p>ID 171 Title: Employing Miniaturized Computers for Distributed Vulnerability Assessment (Authors: Yi Hu, Dustin Sulek, Anthony Carella, Joshua Cox, Allyson Frame, Karen Cipriano, Hong-xia Wang)</p>	<p>ID 42 Title: Activity Recognition using Wearable Computing (Authors: Neamah Al-Naffakh, Nathan Clarke, Paul Dowland, Fudong Li)</p> <p>ID 51 Title: An approach for Evaluating Trust in X.509 Certificates (Authors: Zakia El Uahhabi, Hanan El Bakkali)</p> <p>ID 81 Title: Privacy Requirements for Mobile e-Service in the Health Authority – Abu Dhabi (HAAD) (Authors: Asad M. Khattak, Farkhund Iqbal, Patrick C. K. Hung, Jwo-Shiun Sun, Guan-Pu Pan, Jing-Jie Lin)</p> <p>ID 95 [Virtual] Title: An approach for detecting encrypted insider attacks on OpenFlow SDN Networks (Authors: Charles V. Neu, Avelino F. Zorzo, Alex M. S. Orozco, Regio A. Michelin)</p>	<p>ID 37 Title: Adaptive Policing Algorithms on Inbound Internet Traffic Using Generalized Pareto Model (Authors: Murizah Kassim, Nor Azura Ayop)</p> <p>ID 48 [Virtual] Title: KiCM: A Knowledge-intensive Context Model (Authors: Dennis Lupiana, Fredrick Mtenzi)</p> <p>ID 63 Title: Modeling Cloud Applications for Partition Contingency (Author: Aspen Olmsted)</p> <p>ID 76 Title: Applying Different Classification Techniques in Reciprocal Job Recommender System for Considering Job Candidate Preferences (Authors: Gözde Özcan, Sule Gündüz Ögüdücü)</p>	<p>ID 39 Title: Machine Learning Classification Model For Network Based Intrusion Detection System (Authors: Sanjay Kumar, Ari Viinikainen, Timo Hamalainen)</p> <p>ID 47 [Virtual] Title: South African small and medium-sized enterprises' reluctance to adopt and use cloud-based business intelligence systems: A literature review (Authors: Moses Moyo, Marianne Loock)</p> <p>ID 50 [Virtual] Title: Web Security in the Finance Sector: Analysing the Security of Financial Web Applications – A Case Study (Authors: Tiago Vieira, Carlos Serrão)</p> <p>ID 97 Title: Mitigating IoT Security Threats with a Trusted Network Element (Authors: Jarkko Kuusijärvi, Reijo Savola, Pekka Savolainen, Antti Evesti)</p>

## Monday, 5 December 2016

Room	Plaza 5	Plaza 1	Plaza 8	Barcelona C
Time	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes
Session Title	Session 7 Digital Forensics	Session 8 Multimedia and Web Services	Session 9 Wireless and Sensor Networks	Session 10 Cyber Security
Chair(s)	Jordi Serra	Aspen Olmsted	Adnan Ahmed	Sophia Moganedi
15:45 – 17:15	<p><b>ID 38</b> Title: Identification and recovery of video fragments for forensics file carving (Authors: Khawla Alghafli, Thomas Martin)</p> <p><b>ID 58</b> Title: PRS signal in acquiring Evidence of Digital Chain of Custody (Authors: Tomas Marques-Arpa, Jordi Serra-Ruiz)</p> <p><b>ID 129</b> Title: User Profiling from Network Traffic via Novel Application-Level Interactions (Authors: Gaseb Alotibi, Nathan Clarke, Fudong Li, Steven Furnell)</p>	<p><b>ID 17</b> Title: Comparison of Color Profile Gamut Coverage for Computer Monitors (Authors: Radu Velea, Noel Gordon)</p> <p><b>ID 28</b> Title: A Generic, Personalized Electronic Program Guide System for Accessing Multiple Online TV Providers (Authors: Emad AL-Mohammed, Nigel Linge)</p> <p><b>ID 163 [Virtual]</b> Title: Temporal Resource Scheduling Equity (Authors: Madeline Little, Aspen Olmsted)</p>	<p><b>ID 34</b> Title: Developing Domain-Specific Language for Wireless Sensor Network Application Development (Authors: Aymen J. Salman, Adil Al-Yasiri)</p> <p><b>ID 56</b> Title: Maximizing the Wireless Sensor Networks Lifetime (Authors: Nouredine Seddiki, Amel Douli)</p> <p><b>ID 107</b> Title: A Secure and QoS aware Routing Protocol for Wireless Sensor Network (Authors: Adnan Ahmed, Pardeep Kumar, Ali Raza Bhangwar, Muhammad Ibrahim Channa)</p> <p><b>ID 150</b> Title: The Evolution of Distributed Systems Towards Microservices Architecture (Authors: Tasneem Salah, M. Jamal Zemerly, Chan Yeob Yeun, Mahmoud Al-Qutayri, Yousof Al-Hammadi)</p> <p><b>ID 155 [Virtual]</b> Title: Experience-based learning for identifying sub-regions in Wireless Sensor Networks (Authors: Aiman Ghannami, ChenXi Shao)</p>	<p><b>ID 52 [Virtual]</b> Title: Secure Javascript Object Notation (SecJSON): Enabling granular confidentiality and integrity of JSON documents (Authors: Tiago Santos, Carlos Serrão)</p> <p><b>ID 60</b> Title: Evaluating the Development and Implementation of a Profile-aware Microtasking Platform for Crowdsourcing Services (Authors: Sophia Moganedi, Njabulo Mkhonto, Jabu Mtsweni)</p> <p><b>ID 91</b> Title: EEVi – Framework for Evaluating the Effectiveness of Visualization in Cyber-Security (Authors: Aneesha Sethi, Federica Paci, Gary Wills)</p>

## Tuesday, 6 December 2016

8:30 – 12:00	Registration
9:00 – 10:00	Keynote Speaker: Dr Jorge Lopez Hernandez-Ardieta (Room: Barcelona C)
10:00 – 10:30	Coffee Break and Networking
10:30 – 11:30	Keynote Speaker: Martin Visser (Room: Barcelona C)
11:30 – 12:00	Coffee Break and Networking
12:00 – 13:00	Keynote Speaker: Sandra Stincic Clarke (Room: Barcelona C)
13:00 – 14:00	Lunch
14:00 – 15:30	PhD/Doctorate Consortium, Workshop and Session
15:30 – 15:45	Break
15:45 – 17:30	Sessions
19:00	Closing Ceremony and Conference Dinner (Graden Restaurant)

Room	Plaza 5	Barcelona C	Plaza 1	Plaza 8	Plaza 3
Time	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes	1 hour 30 minutes
Session/Workshop Title	PhD / Doctorate Consortium	Workshop 2 (Part I) 4th International workshop on Big Data and Social Networking Management and Security (BDSN-2016)	Session 11 Information Security	Session 12 Internet Application and Technology	Poster Session 1 Future intellect systems and data analysis
Chair(s)	Charles A. Shoniregun	Mohammad AL-Smadi, Elhadj Benkheifia, Yaser Jararweh	Safwan El Assad	Bernard Markscheffel	Shoichi Nakamura and Hiroki Nakayama
14:00 – 15:30	<p>The idea of writing a research paper or developing a topic of research interest that can lead to a PhD / Doctorate degree or proposal is always an endless thinking of where, when, why, what and who. Therefore, becoming an experienced researcher and writer in any field or discipline takes a great deal of practice. The Consortium has the following objectives:</p> <ul style="list-style-type: none"> <li>• Provide a supportive setting for feedback on current research that will stimulate exchange of ideas</li> <li>• Guide on the future research directions</li> <li>• Promote the development of a supportive community of scholars and a spirit of collaborative research</li> <li>• Contribute to the conference goals through interaction with other researchers and conference events</li> </ul>	<p>ID 145 Title: Efficient Parallel Stochastic Gradient Descent for Matrix Factorization Using GPU (Authors: Mohamed A. Nassar, Layla A. A. El-Sayed, Yousry Taha)</p> <p>ID 148 Title: Face-deidentification in images using Restricted Boltzmann Machines (Authors: M. Aasim Rafique, M. Shoaib Azam, Moongu Jeon, Sangwook Lee)</p> <p>ID 177 Title: Which Metrics for Vertex-Cut Partitioning? (Authors: Hlib Mykhailenko, Giovanni Neglia, Fabrice Huet)</p> <p>ID 185 Title: An enhanced Approach to Preserving Privacy in Social Network Data Publishing (Authors: Sihem Bensimessoud, Souad Benmeziiane, Nadjib Badache, Amina Djellalbia)</p>	<p>ID 40 Title: A Trust Structure for Detection of Sybil Attacks in Opportunistic Networks (Author: Samaneh Rashidibajgan)</p> <p>ID 46 Title: Information Security Policies: A Review of Challenges and Influencing Factors (Authors: Mutlaq Alotaibi, Steven Furnell, Nathan Clarke)</p> <p>ID 72 [Virtual] Title: The Role of Machine Learning in Botnet Detection (Authors: Sean Miller, Curtis Busby-Earle)</p> <p>ID 73 Title: Improving the Accuracy of Search Engine Based Anti-Phishing Solutions Using Lightweight Features (Authors: Gaurav Varshney, Manoj Misra, Pradeep K. Atrey)</p>	<p>ID 70 Title: Telecommunication Traffic through Submarine Cables: Security and Vulnerabilities (Author: Aisha Suliaman Alazri)</p> <p>ID 71 [Virtual] Title: Virtualization Technologies in Web Conferencing Systems: A Performance Overview (Authors: Pedro Roger Magalhães Vasconcelos, Gisele Azevedo de Araújo Freitas, Thales Guimarães Marques)</p> <p>ID 105 Title: A Framework for Personal Data Protection in the IoT (Authors: Ilaria Torre, Frosina Koceva, Odnan Ref Sanchez, Giovanni Adorni)</p> <p>ID 142 Title: Privacy-Sensitive Data in Connected Cars: An Overview of Their Collection, Usage and Protection (Authors: T. Nawrath, D. Fischer, B. Markscheffel)</p>	<p>ID 137 Title: Gaze Network Extraction from Bookmarks in Accordance with Search Intentions (Authors: Takashi Amano, Ryo Onuma, Hiroki Nakayama, Hiroaki Kaminaga, Youzou Miyadera, Shoichi Nakamura)</p> <p>ID 138 Title: Dynamically Visualizing the Relationships Between Web Pages Depending on User's Search Viewpoints (Authors: Daisuke Arakawa, Hiroki Nakayama, Ryo Onuma, Hiroaki Kaminaga, Youzou Miyadera, Shoichi Nakamura)</p> <p>ID 140 Title: Learning History Transition Graphs for Understanding the Programming Learning Situations (Authors: Hiroki Nakayama, Shoichi Nakamura, Kaname Nozaki, Yasuhiko Morimoto, Hiroaki Kaminaga, Youzou Miyadera)</p> <p>ID 149 Title: Risk Management in Payment System Architectures (Authors: Sivakumar Niranjana, Crépel Maxime, Boullier Dominique)</p>



## Tuesday, 6 December 2016

Room	Barcelona C	Plaza 1	Plaza 8	Plaza 3
Time	1 hour 45 minutes	1 hour 45 minutes	1 hour 45 minutes	1 hour 45 minutes
Session Title	Workshop 2 (Part II) 4th International workshop on Big Data and Social Networking Management and Security (BDSN-2016)	Session 13 Internet Application and Technology	Session 14 Big Data and Ubi/Cloud Computing	Session 15 RFID Security and Cryptography
Chair(s)	Mohammad AL-Smadi, Elhadj Benkhelifa, Yaser Jararweh	Mohammad Kamel Alomari	Ibrahim Almarashdeh	Gabriele Spenger
15:45 – 17:30	<p>ID 143 Title: Towards Secure Communications: Review of Side Channel Attacks and Countermeasures on ECC (Authors: Lo'ai A. Tawalbeh, Turki F. Somani, Hilal Houssain)</p> <p>ID 182 Title: Using the Panama Papers to Explore the Financial Networks of the Middle East (Authors: Abdullateef Rabab'ah, Mahmoud Al-Ayyoub, Mohammed A. Shehab, Yaser Jararweh, Bernard J. Jansen)</p> <p>ID 183 Title: An Enhanced Framework for Aspect-Based Sentiment Analysis of Hotels' Reviews: Arabic Reviews Case Study (Authors: Mohammad AL-Smadi, Omar Qwasmeh, Bashar Talafha, Mahmoud Al-Ayyoub, Yaser Jararweh, Elhadj Benkhelifa)</p> <p>ID 178 Title: Interactive querying and data visualization for abuse detection in social network sites (Authors: Leandro Ordonez-Ante, Thomas Vanhove, Gregory Van Seghbroeck, Tim Wauters, Filip De Turck)</p>	<p>ID 53 Title: Cost to Serve of Large Scale Online Systems (Authors: Andrés Paz Sampedro, Shantanu Srivastava)</p> <p>ID 85 Title: System and Protocols for Secure Intercloud Communications (Authors: Chung Kwan Law, Wen Xie, Zheng Xu, Yi Dou, Chin Ting Yu, Henry C. B. Chan, Daniel Wai Kei Kwong)</p> <p>ID 89 [Virtual] Title: Smartphone as a Biometric Service for Web Authentication (Authors: Regio A. Michelin, Avelino F. Zorzo, Marcia B. Campos, Charles V. Neu, Alex M. S. Orozco)</p> <p>ID 109 Title: Digital Divide Impact on E-voting Adoption in Middle Eastern Country (Author: Mohammad Kamel Alomari)</p> <p>ID 153 [Virtual] Title: Automated Penetration Testing Based On A Threat Model (Authors: Norah Ahmed Almubairik, Gary Wills)</p>	<p>ID 75 Title: Intelligent Dynamic Connectivity Control Algorithm for Cluster-based Wireless Sensor Networks (Authors: Seyed Mahdi Jameii, Mohsen Maadani)</p> <p>ID 83 [Virtual] Title: An MMAS-GA for Resource Allocation in Multi-Cloud Systems (Authors: Lotfi Hajjem, Salah Benabdallah)</p> <p>ID 115 Title: Heuristic Evaluation of Mobile Government Portal Services: An experts' review (Authors: Ibrahim Almarashdeh, Mutasem Alsmadi)</p> <p>ID 135 [Virtual] Title: Efficient Fast Recovery Mechanism in Software-Defined Networks: Multipath routing approach (Authors: Aiman Ghannami, ChenXi Shao)</p>	<p>ID 29 Title: Adaptive Image compression in Wireless Sensor Networks (Authors: Benfilali Mostefa, Boukli Hacene Sofiane)</p> <p>ID 45 Title: A Cryptographic Approach for Secure Client - Server Chat Application using Public Key Infrastructure (PKI) (Authors: Isil Karabey, Gamze Akman)</p> <p>ID 54 Title: Linear and Differential Cryptanalysis of Small-Sized Random (n;m)-S-Boxes (Authors: Y. Alsalami, C. Y. Yeun, T. Martin, M. Khonji)</p> <p>ID 55 Title: Experimental Evaluation of RPL Protocol (Authors: Belghachi Mohamed, Feham Mohamed)</p> <p>ID 78 Title: Performance Study of the Index Structures in Audited Environment (Authors: Michal Kvet, Monika Vajsova)</p> <p>ID 102 Title: Structural Improvements of Chaotic PRNG Implementations (Authors: Gabriele Spenger, Jörg Keller)</p>



### Free Post-Conference Barcelona Tour

Wednesday, 7 December 2016	
10:00	Pick-up from Catalonia Barcelona Plaza Hotel
10:00 – 12:00	Free Post-Conference Barcelona Tour
Have a great trip back home! We are looking forward to your participation in 2017!	

Many thanks for your participation and we hope to see you next year...!

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