

Welcome Message from the Editors-in-Chief

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The Internet of Things (IoT) will change the world as we know it. The connection and Internet-connection of day-to-day objects will enable new ways of understanding, optimizing and controlling industrial processes and operation of cities and electricity grids, remote eHealth, home assistance, smart driving, and many other smart-concepts that are to come. The emergence of the IoT is now unstoppable, and it has to be accompanied by new ways of making progress and contribution available to the public.

This is the motivation for this new open-access Transactions on the Internet of Things endorsed by the European Alliance for Innovation (EAI) with the support of the European Commission (EC). This new journal on the IoT aims at publishing innovation and research activities related to the IoT in a new fashion; accepting technical transactions, surveys, and tutorial-style papers, this new journal includes multimedia material and links to videos and any means of creative ways of conveying knowledge. Technical dissemination needs to go beyond black and white contents, and start mixing the accuracy of text, with the appeal of multimedia and live material. Not only this, but this journal will have a review process based on volunteering bids. Therefore, all audience is invited to bid to review papers that are submitted to the journal, thus enabling a crowd-reviewing process. To guarantee that the quality of the reviews and the papers therein published is ensured, though, a selected Editorial Board has been gathered to ensure the top-quality of the material distributed in the EAI Endorsed Transactions on Internet of Things.

For this opening issue, we are delighted to count with 6 invited papers from renowned authors; we have tried to cover key relevant areas of the IoT to show the wide view of the journal and the type of contributions that we, and most likely you, are expecting. We start off with the paper “Tele-Economics in MTC: what numbers would not show”, which discusses the relationship between technology and economics related to Machine-Type

Communications (MTC); this connection is sometimes omitted by the technical community, but it is a key element towards the success of the IoT. The paper “Dedicated Networks for IoT: PHY / MAC state of the art and challenges” describes in details the different existing communication technologies that are being developed to give an answer to the particular needs of the IoT. The paper “Device-to-Device (D2D) Communications for 5G Internet of Things” introduces D2D communications as key enabler for the IoT. Enabling direct communications between devices in close proximity will reduce energy consumption, reduce latency and thus enable mission critical applications, and promote better resource reuse. The paper “Platforms and Protocols for the Internet of Things” dwells on architectural issues of the IoT and discusses up-to-date protocol solutions used to exchange huge amounts of data, such as the case of REST or MQTT protocols, and data handling solutions such as openHAB, Sentilo, and Parser. This contribution also presents a new system built for the IoT where security aspects of the IoT have been also taken into account. The “Crowdsensing Solutions in Smart Cities towards a Networked Society” presents a survey on crowdsourcing solutions for smart cities, introducing the need to engage people to make IoT applications a complete success story. Finally, and somehow connected to the previous paper, the most disruptive paper for this journal is presented with “IoT Community Technologies: Leaving Users to Their Own Devices or Orchestration of Engagement”. This paper discusses the relationship between technology and humans. Such interaction between machines and human-beings is of primary importance. The IoT will be a success not only if technology is ready for it, but also if people accept it.

We believe that this first issue will meet your expectations and will become the first of a long list of issues devoted to the exchange and dissemination of the progress made by the IoT community towards a “brave new world”.

About the Editors-in-Chief



Jesus Alonso-Zarate – PhD and IEEE Senior Member – received his M. Sc. (with Honors) and Ph. D (Cum Laude) degrees in Telecommunication Engineering from the Universitat Politècnica de Catalunya (UPC, Spain) in March 2004 and February 2009, respectively. In 2005, he was awarded by the National Telecommunication Agency (COIT) of Spain with the Best Master Thesis Award in ICT and in 2011 he received the UPC Award for his PhD thesis. He is now with the CTTC (Barcelona, Spain) holding a Senior Research Associate position and is Head of the Machine-to-Machine Communications Department. He is currently pursuing a Master in Business Administration (MBA) at UPC. He has published more than 110 scientific papers in renowned international journals (IEEE Wireless Communications Magazine, IEEE Transactions on Wireless Communications, IEEE Surveys and Tutorials, etc.) and international conferences (IEEE INFOCOM, IEEE ICC, IEEE GLOBECOM, IEEE PIMRC, IEEE VTC, etc.) over the last years. He is recipient of various best paper awards from IEEE ICC, IEEE INFOCOM, and EURASIP. As a research group leader at CTTC, he is very active in both European-funded and R&D projects with companies try to bring the IoT to the real world. He is very active in giving invited talks, tutorials, and speeches to spread the IoT-word worldwide.

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Mischa Dohler is full Professor in Wireless Communications at King's College London, Head of the Centre for Telecommunications Research, co-founder and member of the Board of Directors of the smart city pioneer WorldSensing, Fellow and Distinguished Lecturer of the IEEE, and Editor-in-Chief of the Transactions on Emerging Telecommunications Technologies. He is a frequent keynote, panel and tutorial speaker. He has pioneered several research fields, contributed to numerous wireless broadband, IoT/M2M and cyber security standards, holds a dozen patents, organized and chaired numerous conferences, has more than 200 publications, and authored several books; at a very high citation h-index. He acts as policy, technology and entrepreneurship adviser, examples being Richard Branson's Carbon War Room, House of Lords UK, UK Ministry BIS, EPSRC ICT Strategy Advisory Team, European Commission, ISO Smart City working group, and various start-ups. He is also an entrepreneur, angel investor, passionate pianist and fluent in 6 languages. He has talked at TEDx. He had coverage by national and international TV & radio; and his contributions have featured on BBC News and the Wall Street Journal.

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