

## Special Session

# IOT2.0: Internet of Things Based on Blockchain

for

**IEEE IEMCON 2018** - The 9<sup>th</sup> IEEE Annual Information Technology, Electronics & Mobile Communication Conference  
1-3 November, 2018 - Vancouver, BC  
<http://ieee-iemcon.org/>

### Chaired and Organized by

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Internet of Things, or IoT, as part of the Industry 4.0 revolution, has experienced significant progress in recent years. The essence of IoT is that “smart things” equipped with sensors and actuators collaborate over the Internet. IoT systems currently in use store data in the Cloud which is a central space with databases and services.

The IoT ecosystem is very complex. The vast number of devices connected, the types of wired and wireless communication networks involved, the kinds of software programs used, all make the IoT ecosystem vulnerable and susceptible to attacks. The current IoT ecosystem, if we call it IoT 1.0, was developed largely based on available Internet technologies and did not have a systematically designed secure structure in the first place. Therefore, IoT 1.0 has always been accompanied with security concerns.

Blockchain has emerged as the solution for IoT security due to its intrinsic advantages such as distributed data storage and immutability. It offers the potential for improving the overall security of the IoT ecosystem. IDC predicts that about 20% of all IoT deployments will have some sort of Blockchain services enabled by 2019. There is strong reason to believe that Blockchain will lead to the establishment of a new generation of IoT ecosystem and can possibly be branded as IoT 2.0.

This special track will provide a forum for researchers and industrialists to share recent research results on the convergence of Blockchain and IoT, ranging from overviews, proof-of-concepts case studies, to applications.

### Topics include, but not limited to:

- Blockchain in IoT device identification management
- Blockchain in IoT device authentication, authorization and access control
- Blockchain in IoT data security
- Blockchain in IoT system security
- Blockchain in IoT supply chain management
- Blockchain in M2M communications
- Blockchain in low power IoT communication networks
- Blockchain platforms for IoT development
- Blockchain-based IoT system development tools
- Blockchain implementation in IoT embedded systems

- Blockchain in smart home applications
- Blockchain in smart building applications
- Blockchain in smart city applications
- Blockchain in smart healthcare applications
- Blockchain in smart transport applications
- Blockchain in smart power system applications
- Blockchain in smart manufacturing system applications
- Blockchain in smart agriculture system applications
- Blockchain in smart oil industry applications
- Blockchain-based IoT system: test beds
- Blockchain-based IoT system: simulation tools
- Blockchain-based IoT systems: performance analysis
- Blockchain applications in IoT: overviews
- Blockchain applications in IoT: case studies

### **Paper Categories**

Regular Paper – 7 pages maximum (3 additional pages allowed but at an extra charge)

Short Paper (Work-in-Progress) – 6 pages maximum (2 additional pages allowed but at an extra charge)

Poster – 5 pages maximum

Regular papers should present novel perspectives within the general scope of the conference. Short papers (Work-in-Progress) are an opportunity to present preliminary or interim results. Posters are intended for ongoing research projects, concrete realizations, or industrial applications/projects presentations.

### **Important Dates**

Full Paper Submission:	20 <sup>th</sup> August 2018
Acceptance Notification:	3 <sup>rd</sup> September 2018
Final Paper Submission:	17 <sup>th</sup> September 2018
Presentation Submission:	20 <sup>th</sup> October 2018
Conference:	1 <sup>st</sup> - 3 <sup>rd</sup> November 2018

### **Contact:**

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