

IEEE International Workshop on I-CPSaaS: Sensing-as-a-Service for Industrial Cyber Physical Systems

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Important Dates

- ❖ Paper submission deadline:
January 20, 2021
- ❖ Notification of acceptance:
February 20, 2021
- ❖ Camera-ready papers:
March 1, 2021

Submission link

<https://edas.info/N27513>

Webpage link

<https://icc2021.ieee-icc.org/workshop/ws-25-workshop-sensing-service-industrial-cyber-physical-systems-i-cpsaas>

Scope

With the advent of the Industrial Internet of Things (IIoT), the industrial sector has witnessed substantial changes over the last couple of years. These changes when integrated with the conventional systems not only help to upscale their productions but also help them to achieve their business goals. The ongoing expansion across different domains such as manufacturing, energy systems, transportation, automated vehicles, etc is a perfect example of actively applying this innovative technology to the industrial sector. The major precursors behind this advancement of IIoT can be attributed to more product variability, enhanced quality of products, growing global competition, decreased product cost, and shorter manufacturing time. To cater to the above-mentioned challenges, IIoT leverages the concept of Industrial Cyber-Physical Systems (I-CPS); which enable interactions amongst the machines, data, and humans.

Sensing-as-a-Service (S²aaS) is considered as key component of the I-CPS and is assumed to reside somewhere between the cyber and physical worlds. It also helps in integrating the IIoT data with the marketplace analysing and trading on the gathered data. Nonetheless, the sensors are not necessarily the physical sensors interacting with the environment, but they can be virtual too. In S²aaS, the virtual sensors can be any entity that produces data such as social media accounts, quantified self apps, weather APIs, etc. The data generated from these sensors needs real-time analysis to derive value for its marketplace; and Edge/Fog/Cloud Computing has a significant role to play in the context. This computing paradigm can offer promising results for CPS applications that are characterised by geo-distribution, latency-sensitivity and high-resilience.

Topics

We seek original completed and unpublished work not currently under review by any other journal/magazine/conference. Topics of interest include, but are not limited to:

- Fusion of cyber and physical knowledge for reliable, efficient and robust decision-making
- Design, implementation, and test of Edge/Fog/Cloud Computing platform for I-CPS.
- Sensors for network anomaly detection and ensure security, privacy and trustworthiness
- Efficient computational and communication models for implementing S²aaS in I-CPS
- Use of S²aaS for fault diagnosis in I-CPS
- Use case scenarios for employing Edge/Fog/Cloud Computing for providing sensor-as-a-service in I-CPS
- Machine Learning and Artificial Intelligence solutions for Industrial domain specific CPS
- Physical and Virtual Sensor fusion with Industrial Internet of Things and Edge/Fog/Cloud Computing
- Management of heterogeneous and homogenous data coming from sensors deployed in I-CPS

Paper Submission

The workshop accepts only novel, previously unpublished papers. The page length limit for all initial submissions for review is SIX (6) printed pages (10-point font) and must be written in English. All final submissions of accepted papers must be written in English with a maximum paper length of six (6) printed pages (10-point font) including figures. No more than one (1) additional printed page (10-point font) may be included in final submissions and the extra page (the 7th page) will incur an over length page charge of USD100. For more information, please see IEEE ICC 2021 official website: <https://icc2021.ieee-icc.org/authors>