1th International Workshop on Hybrid Internet of Everything Models for Industry 5.0 (HIEMI)

Technical description, focus and scope

The Internet of Everything (IoE) model presents at its core the promise to aggregate the "four pillars" of people, data, processes and things, in order to extend and improve the processes already present in classical models and, in turn, to enrich the lives of people. One of the most intriguing challenges in IoE is the paradigm "connections among things" shifting to "connections among people, process, data and things". At the same time, in a similar manner, the concept of Industry 5.0 makes its way in the nowadays industrial ecosystem. A peculiar necessity in Industry 5.0 is to increase productivity while not removing human workers from the manufacturing processes. This can be tackled by defining and evaluating hybrid ecosystems in which smart machines are intertwined with humans as collaborators rather than competitors.

To this purpose, the workshop aims at bringing together scientific and industrial communities on discussing, proposing, defining and evaluating innovative and hybrid models for IoE in Industry 5.0 ecosystems. Considering the novelty of the context, the workshop also aims at defining a collaborative research agenda to highlight future research directions.

The workshop focuses on a rapidly advancing context that is attracting a considerable attention both from academic and industrial communities. For instance, according to Semantic Scholar, since 2020 more than 1,700 scientific contributes have been published regarding IoE and relating concepts, such as 6G networks, healthcare systems and edge- and fog-based architectures. Larger mentions are present for Industry 5.0, with more than 250,000 contributes mentioning it. Instantiating a novel workshop on such contexts encourages researchers and practitioners to share new ideas and developments, in order to tackle well known challenges and to pose new ones.

Possible topics include, but are not limited to:

- Green IoT and IoE models for Industry 5.0 technology and engineering applications,
- Smart Manufacturing
- Predictive Maintenance
- Remote Diagnosis and Development
- Artificial Intelligence for IoE
- Intelligent Planning for IoE processes
- Context-awareness and Location Awareness methods for Industrial Ecosystems
- Machine-to-machine Communications
- Hybrid human-computer interaction
- Interactive Data Analysis in Industrial settings
- Data Management Platforms and Framework
- Cloud and Fog Computing for IoE
- Edge and Mobile Computing for IoE
- Social Implications in IoE Industrial Ecosystems
- Sensor Networks
- Cyber-physical systems and interfaces

Submission and review process

Authors are invited to submit either full papers, possibly already submitted to other conferences or journals, and short papers, which are suggested for presenting work in progress, extended abstracts, software prototypes, or general overviews of research projects. Workshop submissions must be in PDF format, written in English and formatted according to the IEEE camera-ready standard format (double column, 10pt font size). Full papers should not exceed 8 pages (including bibliography). Shorter papers must not exceed 3 pages.

All paper will be peer reviewed by at least two members of the program committee.

The workshop expects to present at least five accepted papers.

Dissemination

The workshop will be advertised and promoted through official and unofficial mailing lists, websites and social media platforms. An official website containing all the necessary information will be created and maintained.

Organizers

Francesco Cauteruccio – Polytechnic University of Marche, Italy (f.cauteruccio@univpm.it)
Giorgio Terracina – University of Calabria, Italy (terracina@mat.unical.it)
Domenico Ursino – Polytechnic University of Marche, Italy (d.ursino@univpm.it)

A one-page text-only CFP follows in the next page.

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Call for Papers

Scope and topics of the workshop

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Important dates

Papers Submission due: June 1, 2022
Authors Notification: July 1, 2022
Camera-ready Submission: July 15, 2022

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