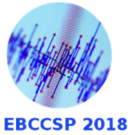


# Perpignan, France

June 27-29, 2018

4th International Conference on Event-based Control, Communication, & Signal Processing EBCCSP 2018



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## Call for Papers

## Special Session on Event-based Electronic Systems

### Special Session Organizers:

#### Laurent Fesquet

TIMA laboratory, Grenoble, France  
[Laurent.Fesquet@univ-grenoble-alpes.fr](mailto:Laurent.Fesquet@univ-grenoble-alpes.fr)

and

#### Shih-Chii Liu

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Today, our digital devices produce increasingly large amounts of data leading to the need for an increasing amount of data storage capacity. In addition, with new communication capabilities not only between humans but also between machines such as robots, cars etc., this problem will become increasingly worse. We are just starting to see the trend towards everyday electronic devices having wireless network connectivity, autonomy and embedded processing capabilities. Even if these devices are small and smart, the Things of the Internet (ToI) will consume a lot of energy because they require a large network infrastructure, large data centers and are counted in tenth of billions. Indeed, the Internet and the so-called "new technologies" already consume about 10% of the electrical power produced in the world. Even if design solutions exist to enhance the energy efficiency of the electronic systems, it is becoming increasingly important to reduce the amount of data so as to reduce energy consumption. One useful solution to limit the amount of data produced is to use non-uniform sampling and event-driven sampling for analog-to-digital conversion instead of sampling at a fixed rate. Indeed, unnecessarily sampled data lead to unnecessary computation and storage which leads to unnecessary power consumption. Similarly, clock synchronization of different blocks on an electronic system, while convenient for design, can be a source of energy waste. This problem is mitigated by several techniques such as gated clocks but an event-driven circuit and event-based techniques for sampling and processing signals can be a better solution. This special track targets all techniques that use the event-based strategy in the field of the electronic systems including event-based detection, non-uniform analog-to-digital conversion and processing, event-driven circuits and sensors. This track welcomes submissions that describe the use of the event-based paradigm to drastically reduce the power consumption of their electronic systems.

**Submission of Papers:** Manuscripts must be submitted electronically in PDF format, according to the instructions contained in the Conference web site. Contributions must contain original unpublished work. Papers that have been concurrently submitted to other conferences or journals (double submissions) will be automatically rejected. Papers are to be submitted electronically in PDF format. Two types of submissions are solicited: Long Papers - 8 double-column pages. Work-in-Progress Papers - limited to 4 double-column pages. For further details, please consult the conference web pages.

**Paper Acceptance:** Each accepted paper must be presented at the conference by one of the authors. The final manuscript must be accompanied by a registration form and a registration fee payment proof. All conference attendees, including authors and session chairpersons, must pay the conference registration fee, and their travel expenses.

**Conference Format:** The conference will comprise multi-track sessions for regular papers, to present significant and novel research results with a prospect for a tangible impact on the research area and potential implementations; work-in-progress (WIP) sessions; panel discussions on the state-of-the-art and emerging trends, involving leading experts from industry and academia; and public discussion sessions moderated by leading experts in the field of industrial automation systems.

### Author's Schedule:

Regular and special sessions papers		Work-in-progress papers	
Proposals for special sessions due	February 18, 2018	Submission deadline	April 30, 2018
Submission deadline	April 30, 2018	Acceptance notification	May 14, 2018
Acceptance notification	May 14, 2018	Deadline for final manuscripts	May 20, 2018
Deadline for final manuscripts	May 20, 2018		

<http://www.ebccsp2018.org>