

# CyPhy'19 Call for Papers

Submitted by [cyphyorg](#) on Mon, 05/27/2019 - 4:31pm

[Model-Based Design of Cyber-Physical Systems](#) (CyPhy'19) is the ninth instance of a workshop that takes a broad interpretation of the area and aims to facilitate the timely consolidation and sharing of new knowledge from diverse disciplines. Cyber-physical systems (CPSs) combine computing and networking power with physical components. They are a challenging domain for innovation that encompasses robotics; smart homes, buildings, and mobility solutions; medical implants; drones, and numerous others. CPSs are the medium through which next-generation Artificial Intelligence and Machine Learning applications will be deployed, and are a growing source of big data. CyPhy'19 brings together researchers and practitioners working on next-generation technologies for modeling, development, analysis, simulation, optimization, evaluation, and deployment of CPSs.

CyPhy'19 will be held as part of [ESWeek](#) in NYC, NY. The conference will take place at the Kimmel Center for University Life.

This year, Professor Edward A. Lee (UC Berkeley) will give the invited talk.

## Important Dates:

Abstract submission June 8th, 2019

Paper deadline June 15th, 2019

Notifications July 15th, 2019

Camera-ready August 15th, 2019

Workshop October 17-18th, 2019

Topics of interest include, but are not limited to the following aspects of cyber-physical systems:

- \* Case studies and applications: Experience and case studies in the development of industrial and/or research-oriented cyber-physical systems in domains such as smart mobility, health innovation, medical and healthcare devices, smart homes, emerging communication and networking technologies (for example 5G and 6G), Internet-of-Things,

- \* Methods: Systematic, rigorous, and set-based methods for modeling, implementation, simulation, optimization, manufacturing, testing, and verification of cyber-physical systems; model-based engineering, systems engineering; the use of formal verification and reachability analysis tools; counterexample-guided abstraction refinement (CEGAR), safe/verified Artificial Intelligence and Machine Learning (AI/ML),

- \* Tools: New tool technologies, evaluations of novel research tools, extensive case studies and industrial experiences, comparisons of state of the art tools in realistic contexts, and

\* Foundations: Domain specific languages (DSLs) including hybrid automata, hybrid process calculi, and differential games; models of computation; multi-domain modeling languages; correctness of implementations, interval computation and validated numerical methods; experimental model validation.

Submissions types: Three types of papers will be solicited and evaluated: 1) research papers, 2) advanced tutorials, and 3) tool demonstrations. Papers are expected to be around 15-25 pages long in LNCS format.

\* Research papers will be evaluated according to the traditional standards of novelty, technical contribution, clarity, and overall quality of presentation. Such papers may contain theoretical results, experimental results, or cases studies that go beyond the scope of what prior art has been able to address. Research papers may also address open problems. Such papers will be evaluated based on the extent to which these problems were not articulated previously and the extent to which they are clear and actionable. Research papers may also be surveys. Such papers will be evaluated based on their timeliness, the absence of comparable surveys, how comprehensive they are, and the extent to which they organize existing information in a useful manner.

\* Advanced tutorials will be evaluated based on the extent to which they make it clear that there is a need for expository material on this subject, that there is currently a shortage of such material, the technical depth of the material covered, and the accessibility and overall quality of the presentation.

\* Tool demonstrations will be evaluated based on the timeliness of the presentation of the tool, the extent to which the tool can address problems that are currently much more difficult or impossible by existing tools, and the accessibility and overall quality of the presentation.

Proceedings: As with previous years, the proceedings are expected to be published in the Springer Verlag Lecture Notes in Computer Science (LNCS) series. To maximize the benefit from the workshop, authors will be asked to first prepare a camera-ready copy of accepted papers before the meeting, and to submit a revised version that takes into account workshop feedback after the meeting.

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Paper Submission: Papers should be submitted electronically via the [EasyChair](#) web site.

Papers should be formatted according to the Springer [LNCS Style](#), not exceed the respective page limits (including figures and references), and be submitted in PDF.

Except for regular research papers, the paper category must be indicated at the end of the title in parenthesis at the time of the initial submission and in the final camera-ready version.

Simultaneous submission to other venues with a formal publication (workshops, conferences, symposia, and journals) is not allowed. Duplicated submissions or other types of plagiarism will result in rejection and a report will be sent to the corresponding institution's dean or manager.

Papers not adhering to the format or page limit may be rejected without a review.

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[? Call for Contributions ? MODELS 2019 Satellite Events CfP: CyPhy '19 - Extended Deadline ?](#)

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