

# Call for Papers

## 1<sup>st</sup> International Workshop on Emerging Ideas and Trends in Engineering of Cyber-Physical Systems (EITEC' 14)

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Cyber-physical systems are based on networked embedded software systems which connect computational entities in a collaborative manner with physical entities of the real world to achieve an overall purpose of its users. Together with available content and services on the World Wide Web, they build networks of systems that integrate with the physical environment. This will lead to radical changes in many application fields (e.g. energy, mobility, healthcare) and will have an impact on our daily lives. Many technology leaders are already in the midst of a global race of repositioning and reinventing themselves by developing new dynamic CPS inspired business models. However, mastering the engineering of complex and trustworthy CPS faces serious challenges, which have to be addressed by the engineering methodologies of the future.

The EITEC workshop series aims at bringing together researchers and practitioners from various domains relevant to CPS dedicated to mastering the challenges in engineering of CPS today and in the future. The workshop will be a venue to share results and new ideas, discuss upcoming research directions, and to catalyze a joint industry-academia platform.

The organizers invite contributions with a strong focus towards CPS that describe problem statements, trends, and emerging ideas in the engineering of CPS. The workshop defines 3 categories of submissions, targeted to address dedicated topics:

### *Paper Categories*

#### *Category 1: Problem Statements and emerging ideas*

Submissions for this category shall describe open issues in the engineering of CPS of theoretical or practical nature and discuss / present corresponding solution ideas or describe industrial and academic challenges for the engineering of CPS.

#### *Category 2: Demonstration papers*

Submissions in this category will present and demonstrate prototypical features of development tools that address the specific challenges in engineering of CPS.

#### *Category 3: Research Directions and trends*

Submissions in this category shall discuss contributions that address proposals how to shape future research in the engineering of CPS.

### *Topics*

Topics for contributions in the aforementioned categories may include:

- *Engineering Paradigms*: Model-based engineering, engineering methodologies, quality assurance techniques, engineering for adaptation, self\* CPS, heterogeneous applications and platforms.
- *Modeling and Analysis*: Multidisciplinary modeling and analysis, context-analysis and context-awareness, specification of requirements, functional analysis, verification and validation of safety, security, and timing properties.
- *Architectures*: Scalable and evolvable system and software architectures, architectural design and languages.
- *Variability*: Management, modelling and analysis for CPS.
- *Processes*: Integrated processes based on the design-operation life-cycle continuum of CPS.
- *Industrial Practice*: Experiences from efforts in the industry addressing the technological challenges that come with the introduction of CPS.

### *Workshop format:*

The workshop will be held as part of CPS Week 2014 to take place in Berlin, Germany on April 14-17, 2014. It will feature invited keynotes as well as peer-reviewed paper presentations organized according to the 3 categories defined above. Submissions, not exceeding sixteen (16) pages using the Lecture Notes in Informatics (LNI) Style of the German Informatics Society, should contain original research, and sufficient detail to assess the merits and relevance of the contribution. Papers must be submitted in PDF format using the EasyChair submission web page: <https://www.easychair.org/conferences/?conf=eitec2014>. Submissions will be reviewed in a peer-review process by at least 3 members of the program committee. The accepted contributions will be published at Springer.

### *Important Dates (tbc):*

Submission deadline	Feb 7th 2014
Author feedback/rebuttal period	Mar 2 <sup>nd</sup> - 4th 2014
Notification of acceptance/rejection	Mar 7th 2014
Final version due	Mar 21rd 2014
Workshop	Apr 14th 2014

### *Program Committee (preliminary)*

Wolfgang Böhm (Technische Universität München)  
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Kee Chaing Chua (National University Singapore)  
Heinrich Daembkes (EADS - Cassidian)  
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### *Organization Team:*

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The workshop is jointly organized by the German government sponsored project SPES\_XT and the Cyber-Physical Systems Action Line of EIT ICT Labs.

### *Workshop Web Page:*

<http://EITEC.informatik.tu-muenchen.de>

### *Contact:*

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