Call for Papers

IEEE Design&Test

Special Issue on Education for Cyber-Physical Systems

Aims and Scope:

Cyber-physical systems (CPS) are integrations of physical systems with computations. Their design poses many challenges. For example, there is a potential mismatch between the discrete nature of today's computing systems and typically continuous physical systems. Also, CPS design has to meet and adhere to many constraints and take many objectives into account. As a result, education for CPS design is challenging. The special issue on education for cyber-physical systems aims to provide researchers, educators, and industrial representatives with a view on the needs and share solutions for embedded and cyber-physical systems education. The special issue addresses questions such as "What skills and capabilities are required by the engineers of tomorrow?", "How should the corresponding educational programs be formed?", and "How can effective pedagogic methods be introduced in this domain"?

Topics of Interest:

- Industrial needs regarding embedded and cyber-physical systems education
- Experiences and trade-offs in curricula design and implementation
- Experiences of educational forms, e.g. MOOCs and remote labs
- Position papers regarding the curricula of tomorrow
- Hands-on experiences, labs, "industry as lab"
- Educational aspects of
  - Embedded systems, Cyber-physical systems, Internet of things
  - Embedded Control, Interfaces to the physical world
  - Real-time computing
  - Distributed systems issues
  - Architecture design and hardware/software co-design
  - Embedded system networks
  - Applications of embedded and cyber-physical systems
  - Safety, security, and privacy of CPS
  - Ethics of CPS

Submission Guidelines:

Prospective authors should follow the submission guidelines for IEEE Design & Test. All manuscripts must be submitted electronically to IEEE Manuscript Central at https://mc.manuscriptcentral.com/dandt. Indicate that you are submitting your article to the Special Issue on Education for Cyber-Physical Systems. Submitted manuscripts must not have been previously published or currently submitted for publication elsewhere. Manuscripts must not exceed 5,000 words, including figures (with each average-size figure counting as 200 words) and a maximum of 12 references (50 for surveys). This amounts to about 4,000 words of text and a maximum of five small to medium figures. Accepted articles will be edited for clarity, structure, conciseness, grammar, passive to active voice, logical organization, readability, and adherence to style. Please see IEEE Design & Test Author Resources at http://www.ieee.org/publications_standards/publications/authors/magazines.html to view links in Submission Guidelines Basics and Electronic Submission Guidelines and requirements.

Schedule:

- Article due for review: 10th January, 2020
- Reviews completed: 1st March, 2020
- Article revisions due: 15th April, 2020
- Notice of final acceptance: 15th May, 2020
- All materials due to edit: 15th June, 2020
- Publication date: September/October, 2020

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