With the proliferation of embedded ubiquitous systems in all aspects of human life, the embedded systems world has become a fast growing industry. Embedded systems have to rely on high quality hardware as well as high quality software. Software development for embedded systems is often a complex undertaking and fundamentally different from that of non-embedded systems. Complexity arises from the need to co-design and create software at low-level of abstraction that also interacts closely with hardware, and with strong emphasis on dependability and mission-critical real-time constraints. Compared to traditional software development, the increasing complexity also exacerbates challenges in embedded software development processes, such as troubles in achieving sufficient product quality and timely delivery. In order to tackle these challenges in embedded software development, industry needs to apply software engineering technologies that are appropriate for specific situations.

The SEES 2012 workshop aims to provide researchers and practitioners an international forum to discuss the issues and challenges in adopting software engineering methods for embedded systems development.

TOPICS OF INTEREST

- Software engineering technologies in embedded systems research and development;
- Real-time (embedded) systems development processes;
- Verification and validation (V&V) in embedded software and systems;
- Formal approaches (e.g., formal methods and static analysis) for embedded systems verification;
- Software engineering for automotive development;
- Product-dependent software engineering processes;
- Simulation in software engineering;
- Embedded software project management;
- Standard architectures, infrastructures and platforms;
- Requirements engineering for embedded systems;
- Model-based and component-based development technologies, domain-specific languages;
- Virtual integration for systems development;
- Software-hardware architecture co-design;
- Security, reliability and trustworthiness of embedded systems.

KEYNOTE SPEAKER

Prof. Ivica Crnkovic
Mälardalen University, Sweden
“Managing complexity & predictability in embedded systems: Applying component-based development”

SUBMISSIONS

The workshop invites
- research papers (max. 7 pages)
- position papers (max. 3 pages).

All submissions must conform at time of submission to the ICSE 2012 Format and Submission Guidelines in PDF format.

Papers can be submitted electronically via the EasyChair submission system.

The workshop proceedings will be included in the ICSE 2012 electronic proceedings collection.