

# Call for Papers

## Journal of Systems and Software

### Special Issue on Dynamic Analysis and Testing of Embedded Software

#### Background

Dynamic analysis and testing techniques of embedded software use the information collected from executions to assure or evaluate software artifacts, or to extract, infer, measure, or verify properties of these artifacts. At the same time, the stringent resource constraints imposed by the hardware environment should also be addressed. Although existing techniques for embedded software have been investigated for decades, as new low-power devices emerge (such as motes of wireless sensor networks, specialized devices for pervasive computing, or wearable devices), many of them have serious limitations to be directly applied to assure software running on these devices. To detect failures from such software effectively and efficiently, existing techniques should be re-examined or new techniques should be developed. This special issue solicits novel research results in dynamic analysis and testing for embedded software that come with theoretical and/or extensive empirical validation of the claimed contributions.

#### Topics

The topics of interest include, but are not limited to:

- Emerging dynamic analysis and testing techniques that can be applied on low-power platforms
- Reports on successful experiences or limitations of techniques for analyzing and testing embedded software
- Novel metrics, test adequacy, or correctness criteria for embedded software considering the low-power constraint
- Efficient framework or automation to support analysis and testing of embedded software
- Empirical evaluations or industrial case studies that direct future research directions

#### Submission Information

We welcome high quality submissions that are original work, not published or currently submitted elsewhere. We also encourage extensions to conference papers, unless prohibited by copyright, if there is at least 30% difference in the technical content. Authors should follow the instructions posted at [http://www.elsevier.com/wps/find/journaldescription.cws\\_home/505732/authorinstructions](http://www.elsevier.com/wps/find/journaldescription.cws_home/505732/authorinstructions) to prepare their manuscripts, which must be written in English and submitted in PDF format via the Elsevier Editorial System (EES) at <http://ees.elsevier.com/jss>. To ensure the manuscripts are correctly submitted to this special issue, please select “Dynamic Analysis and Testing of Embedded Software” as the “Article Type.”

#### Important Dates

April 1, 2010	Paper submission deadline
Jul 1, 2010	All reviews back
July 15, 2010	First round notification
September 15, 2010	Revised submission deadline
November 15, 2010	All reviews back
December 15, 2010	Final notification

#### JSS Editor-in-Chief

Hans van Vliet, Department of Information Management and Software Engineering, Vrije Universiteit, The Netherlands

#### Guest Editors

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