Call for Papers: Special Issue of Software Quality Journal on High Assurance Systems Engineering

Scope:
As software-based systems become more pervasive there is a need to construct systems that in addition to meeting their functional requirements also adhere to their non-functional requirements, specifically those requirements that impact reliability, safety and security. The stated requirements all make a strong case for high assurance systems engineering. Both academia and industry continue to seek new techniques and tools to develop systems that ensure their systems meet the highest assurance standards. The strength of the evidence supporting the assurance case is of central importance to the argument that a system satisfies its reliability, safety, and security policies. Supporting evidence can be obtained from a number of sources including: testing, verification, design methodologies, simulation, and analysis tools.

In this special issue of the Software Quality Journal, the focus will be on new and innovative techniques that support the development of high assurance systems.

The topics of interest for the special issue are as follows:

Platforms and Architectures
- Cyber-physical Systems
- Cloud Computing
- Distributed Systems
- Web Services
- Embedded Systems
- SCADA Systems and other Critical Infrastructures

Behavior
- Emergent Behavior
- Fault Tolerance
- Simulation
- Monitoring

Development and Understanding
- Model-driven Engineering
- Synthesis
- Formal Methods
- Domain Specific Languages
- Evolution and Change
- Verification and Validation
- Software Analysis and Visualization
- Transformation-based Development
- Security, Reliability and Safety
- Tools for High Assurance Systems

Paper Submission Details: Authors are invited to submit original research contributions to http://www.editorialmanager.com/sqjo/ Choose “S.I.: High Assurance Systems Engineering” as the article type. Papers that are extensions of conference or workshop publications must contain at least 30% new material, it must be clearly stated in the cover letter to the EiC that the manuscript is an extension of a previously published work and the new material must be identified.

Important Dates:
Submission deadline: April 1st, 2014
First round notification: July 1st, 2014
Revised submission deadline: September 1st, 2014
Final notification: November 1st, 2014.

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