



Call for Papers / Invitation to Special Session SS02

FAULT TOLERANCE TECHNIQUES IN DISTRIBUTED EMBEDDED AND AUTOMATION SYSTEMS

Special Session Organizers

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Aim: Dependability, in its different forms (reliability, availability, safety, etc.) is an important attribute of many embedded and automation systems. Actually, it is claimed that one of the advantages of the introduction of distribution in such systems is that it facilitates the increase of dependability. Fault tolerance techniques play a prominent role in achieving high levels of dependability, particularly when distribution, and thus communication media, are present. Redundancy of different kinds (spatial, temporal, information, etc.) can be introduced in the system and different replication techniques can be used to achieve tolerance to both temporal and permanent faults at nodes and communication links. Despite the increase in cost that the use of redundancy implies, it is widely used in many kinds of systems such as those for highly-available automation, safety-critical applications or highly-reliable control (e.g. x-by-wire in automobiles). In fact, temporal redundancy is a de facto requirement for any communication protocol (even those used in systems that are not designed to be specially dependable) since this part of the distributed system is particularly prone to exhibit errors caused by transient faults. There is an ongoing interest in these matters and the research community continues to look for solutions that are adequate for the specific needs of embedded and automation distributed applications. The corresponding publications are usually scattered among different conferences and journals, and there is a need to gather them into more focused events. This Special Session proposal purports to attract the authors that usually publish related papers in IES conferences and also others that normally do it in other events. The SS would be an excellent opportunity for discussing the common problems that are inherent to the research in fault tolerance and to try to establish the current and future trends in this specific area.

SUBMISSION OF PAPERS

Papers should be submitted electronically. For further details, please refer to the conference web page.

AUTHOR'S SCHEDULE

Deadline for submission of papers: April 8, 2012

Notification of papers acceptance: May 30, 2012

Final manuscripts due: July 8, 2012

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