



Journal of Aerospace Computing, Information, and Communication (JACIC)

Call for Papers: Special Issue on Self-Stabilization

The topic of self-stabilizing systems has been receiving growing attention in recent years. The interest in the self-prosperities of systems including self-healing, self-organizing, self-adaptive, automatic recovery, autonomic computing etc., dramatically grows in recent years. The self-stabilization property is a well defined and provable property of a system, namely, the ability of a system to be started in an arbitrary (after transient faults) state. Thus, it allows automatic recovery following transient faults and the possibility of starting a system without a global starting signal. In 1974, E. W. Dijkstra published the pioneering paper in this field, presenting self-stabilizing mutual-exclusion protocols. The progress since 1974 including symposiums and seminars vast number of publications and a book on the subject of active and vivid research community. The research results prove that the self-stabilization paradigm is useful in many contexts in particular for critical mission computing systems such as avionic controlling devices.

The special issue is requesting original papers that contribute significantly to our growing knowledge on self-stabilization, as well as comprehensive surveys of sub-areas. We hope that the special issue will make the topic accessible to both theoreticians and practitioners of the aerospace field, and will stimulate new research and industry on the topic.

The Journal of Aerospace Computing, Information, and Communication (JACIC). is a peer-reviewed scholarly journal.

<http://www.aiaa.org/jacic/>

Papers are solicited describing original results in all areas of self-stabilization including, but not restricted to:

1. Self-stabilizing distributed algorithms, deterministic or randomized
2. Techniques for the design and analysis of self-stabilizing systems
3. Stabilization of mobile, sensor and ad-hoc communication networks
4. Self-stabilizing control systems
5. Self-stabilizing real-time systems
6. Super-stabilizing, fault-containment and adaptive systems
7. Self-stabilizing algorithms that cope with permanent faults
8. Combining Self-* and Autonomic Computing/Communication AI methods with Self-Stabilization
9. Self-stabilizing (proactive) security and cryptography

The paper submission deadline is September 1, 2005, and the papers will appear in the Jan., 2006 issue of the journal. The papers will be peer-reviewed, and revised manuscripts will need to be submitted by Dec. 15, 2005.

Guest Editors:

Shlomi Dolev
Department of Computer Science
Ben-Gurion University
Beer-Sheva, 84105, Israel
dolev@cs.bgu.ac.il

Ted Herman
Department of Computer Science
University of Iowa
Iowa City, Iowa, 52242USA
herman@cs.uiowa.edu

