Workshop on “Reliability in Embedded Systems”

This workshop’s emphasis is reliability concerns in networked embedded systems. The area of reliability of a single embedded system continues to progress, but increasingly, embedded processors are arranged into networks (fixed, dynamic, or ad hoc) and new applications propose that appliances, vehicles, and infrastructure all interoperate in wireless domains, which complicates the tasks of the embedded processors in those devices. Familiar topics such as reliability engineering, failure diagnosis, testing, and fault tolerance need to be revisited in such contexts where constraints of light-weight processing and perhaps energy conservation are concerns. Presentations at the workshop focus on experience, experimental results, case studies, and articulation of problems particular to networked embedded systems and their environments. Some examples of the topics in the workshop are fault-tolerant embedded systems as nodes in networks, validation and testing of networked embedded systems, management and health-monitoring of networked embedded systems, graceful degradation of damaged or disrupted embedded systems. Some of the working discussions of the workshop are directed to adaptive examples of networked embedded systems and the survivability of embedded systems in disruptive environments.

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