Self-adaptive computing with its concept originating from artificial intelligence and software engineering, is now broadly explored in software, hardware and system design and widely applied in diverse application areas. A self-adaptive system monitors its own status, and adjusts its own behaviors to approach desirable improvement. This special issue focuses on the self-adaptive paradigm on networked embedded systems (NES), a scalable embedded computing infrastructure for different applications. In particular, self-monitoring and self-reconfiguration can be applied to improve performance, minimize power/energy consumption, tolerate faults, or support other potential features. The realization of self-adaptive features on NES requires the expertise of designing run-time reconfiguration techniques on resource-constrained computing and communication platforms, e.g. sensor networks, multi-core or many-core systems, soft or hard real-time systems, Internet-of-Things (IoT), Cyber-Physical Systems (CPS), etc. The design space exploration and automation process are challenged by the means to enable, facilitate and extend the emerging adaptive features.

Topics

- Novel works (not under review or submission to any other venues) on all design aspect of self-adaptive networked embedded systems- methodologies, design space exploration, system architectures, design automation, applications and case studies, including but not limited to the following topics:
  - Software, hardware and software/hardware co-design
  - Self-adaptation for performance, energy-efficiency and dependability
  - Tradeoff between energy, performance and dependability
  - Self-* properties: self-configuration, self-optimization, self-healing and self-protection
  - Self-adaptive computing on sensor networks, system-on-chip, network-on-chip, multimedia sensor networks, or other forms of parallel and distributed embedded systems
  - Resource management, adaptive mapping and scheduling
- General-purpose computing, real-time systems, resource-constrained systems and safety-critical systems
- Heterogeneous and reconfigurable systems, SDR (software-defined radio)
- Programming model, specification and formal verification
- Case studies and industrial examples in multimedia, healthcare, transportation, agriculture and other application areas
- Prospective systems (Internet-of-Things, Cyber-Physical Systems, Web-of-Things, etc.)
- Retrospectives and outlooks

**Important Dates:**

- Submission: Sep 1st, 2013
- Notification: Nov 1st, 2013
- Camera Ready: Dec 15th, 2013

**Submission Procedure:**

Prospective authors should submit their manuscripts using the Editorial Manager system of Springer at: www.springer.com/journal/10617 and selecting as article-type the option “S.I. : Self-Adaptive Networked Embedded Systems”.

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