

## 2. Ninth International Workshop on Parallel and Distributed Real-Time Systems (WPDRTS) & Sixth International Workshop on Embedded/Distributed HPC Systems and Applications (EHPC) Monday, April 23, 2001

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### Workshop Description

Real-time and embedded systems have rapidly advanced from simple application-specific embedded systems handling periodic updates from sensors to include large distributed heterogeneous systems designed for asynchronous and dynamic operation with high degrees of flexibility, autonomy, quality of service, and reliability.

The Joint International Workshop on Parallel and Distributed Real-Time Systems and International Workshop on Embedded/Distributed HPC Systems and Applications is a forum for large-scale parallel and distributed real-time systems and high performance computing technology for embedded/distributed systems. Of interest are both the development of relevant technology (e.g., hardware, middleware, tools) as well as the applications built using such technology.

Topics of Interest: *Algorithms and Applications*: addressing computing needs of large-scale parallel and distributed real-time and embedded military and commercial applications areas such as signal/image processing, advanced vision/robotic systems, smart-sensor-based systems, industrial automation/optimization, vehicle guidance, command and control, databases. *Networking*: in-the-large application programming models/API's, partitioning/mapping, system integration, debugging and testing tools. *Programming Environments*: software design, programming, and parallelization methods/tools for DSP-based, reconfigurable,

and mixed-computation-paradigm architectures. *Operating Systems and Middleware*: distributed middleware services needs (e.g., QoS, object distribution), configurable or optimal OS features needs, scheduling, runtime systems, resource management. *Architectures*: special-purpose processors, packaging, mixed-computation-paradigm architectures, size/weight/power modeling and management. *Modeling, Analysis and System Specification*: new paradigms, benchmarking, tools and environments, formal methods, object orientation, validation, languages, simulation, high assurance systems. Of special interest this year is work on methods and techniques for component-based development of real-time distributed systems.

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