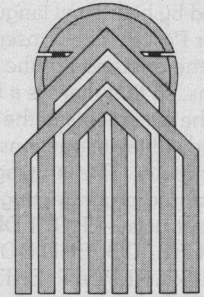


# An invitation to attend REAL-TIME SYSTEMS SYMPOSIUM



## Scope:

This symposium addresses the design and development of real-time systems. Real-time systems generally perform high-speed data acquisition and control with distributed computing networks. This is a three-day sequel to last year's Distributed Data Acquisition, Computing, and Control Symposium.

## Sponsors:

- IEEE Computer Society
- TC Data Acquisition and Control
- TC Distributed Computing

December 8-10, 1981 • Eden Roc Hotel • Miami Beach, Florida

### Preliminary Program Tuesday, December 8, 1981

**Morning:** Opening Session: The Challenge of Real-Time Control Systems—R. Larson

**Afternoon:** Computer Networks

- A 4 x 4 Modular Crossbar Design for the Multistage Interconnection Network—A. C. Hung and M. Malek
- Multi Microprocessor Network Operating System—A. Faro and G. Messina
- An Analysis of Ring and Clustered Ring Interconnection Topologies—H. O. Welch
- The Impact of Process Interconnection on the Global Bus Architecture—H. Li
- A Mathematical Approach to the Design of VLSI Networks for Real Time Computation Problems—D. Cohen and L. Johnsson

### Wednesday, December 9, 1981

**Morning:** Fault Tolerance

- Distributed Checkpoint in a Distributed Data Management System—G. Ferran
- Fault Tolerance of Radiation Disturbed Multi Microprocessor—A. M. van Tilborg and T. J. Jasinski
- Real-Time Fault Diagnostics of Multi Microprocessor Systems—H. C. Fu and G. M. Flacks
- Fault Tolerant Distributed Computing with Very High Speed Integrated Circuits—R. R. Ramseyer, J. W. Thomas, and L. L. Kinney
- Random Test Generation for Irredundant Combinational Logic Networks with a High Measure of Confidence—S. R. Das, Z. Chen, and W. B. Jones

**Afternoon:** Individual Discussions

**Evening:** Workshop on Theory vs. Practice in Distributed Processing  
Chairman: C. Vick

### Thursday, December 10, 1981

**Morning:** Real-Time Control

- Issues in the Design and Development of Real-Time Data Acquisition and Control Systems—R. Vasudevan
- On-Line Replacement of a Particle Accelerator Control Computer—D. E. Schultz and S. K. Brown
- Task Synchronization in Distributed Real-Time Control Systems—M. Couvoisier, R. Valette, and J. Golinski
- Minimizing the Impact of Timing Constraints: Experience with a Microprocessor-Based Interface for Supporting Real-Time Graphics Data Entry, C. F. Starmer
- Real-Time Control of Macro Data Flow Architectures—L. Meier

**Afternoon:** Distributed Data Processing

- On the Description of Multiprocessor Architectures—S. G. Shiva
- A Distributed Processing Architecture of Fast Polynomial Transform for Real-Time Computation of a Multi-Dimension Cycle Convolution—K. Y. Liu
- On the Design of a Task Allocation System for Time-Critical Applications—P. Ma, E. Y. S. Lee, and M. Tsuchiya
- Allocation and Scheduling for Software Molecules—L. Meier
- Problems of Resource Assignment for Dynamic Architectures—S. P. Kartashev

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## REAL-TIME SYSTEMS SYMPOSIUM

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