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   Nota di contenuto   Invited Paper -- An Architectural Perspective of Real-Time Ada Applications -- Ravenscar Profile and High Integrity Systems -- A Formal Model of the Ada Ravenscar Tasking Profile; Protected Objects -- An Ada Runtime System Implementation of the Ravenscar Profile for High Speed Application-Layer Data Switch -- Re-engineering a Safety-Critical Application Using SPARK 95 and GNORT -- An Ada95 Solution for Certification of Embedded Safety Critical Applications -- Software Architectures and Design -- Architectural Frameworks: Defining the Contents of Architectural Descriptions -- Mapping Object-Oriented Designs to Ada -- Efficient and Extensible Multithreaded Remote Servers? -- Testing -- Report on the VERA Experiment -- Acceptance Testing of Object Oriented Systems -- Formal Methods -- Environment for the Development and Specification of Real-Time Ada Programs -- Interprocedural Symbolic Evaluation of Ada Programs with Aliases -- Automatic Veri.cation of Concurrent Ada Programs -- Translating Time Petri Net Structures in Ada 95 Statements -- Education -- Railway Scale Model Simulator -- Ada 95 as a Foundation Language in Computer Engineering Education in Ukraine -- Distributed Systems -- yaRTI, a Ada 95 HLA Run-Time Infrastructure -- An Ada95 Implementation of a Network Coordination Language with Code Mobility -- CORBA & DSA:

Divorce or Marriage? -- How to Modify the GNAT Frontend to Experiment with Ada Extensions? -- On the Use of Controlled Types for Fossil Collection in a Distributed Simulation System -- An Application (Layer 7) Routing Switch with Ada95 Software -- Ada Binding to a Shared Object Layer -- Real-Time Scheduling and Kernels -- The Ceiling Protocol in Multi-moded Real-Time Systems1 -- A "Bare-Machine" Implementation of Ada Multi-tasking Beneath the Linux Kernel -- Implementing a New Low-Level Tasking Support for the GNAT Runtime System? -- Tools -- MetaScribe, an Ada-Based Tool for the Construction of Tranformation Engines -- An Adaptation of Our Ada95/O2 Binding to Provide Persistence to the Java Language: Sharing and Handling of Data between Heterogeneous Applications Using Persistence -- Browsing a Component Library Using Non-functional Information -- The Role of Ada in Hardware/Software Codesign -- Hw/Sw Codesign of Embedded Systems -- Hardware/Software Embedded System Specification and Design Using Ada and VHDL1 -- System on Chip Specification and Design Languages Standardization -- Fault Tolerance -- An Incremental Recovery Cache Supporting Software Fault Tolerance -- Shared Recoverable Objects -- Fault Tolerance by Transparent Replication for Distributed Ada 95 -- Case Studies -- A Case Study in the Reuse of On-Board Embedded Real-Time Software -- Development of Flight Control Software in Ada: Architecture and Design Issues and Approaches.

| Sommario/riassunto | The Fourth International Conference on Reliable Software Technologies, Ada- Europe'99, took place in Santander, Spain, from June 7 to 11, 1999. It was sponsored by Ada Europe, the European federation of national Ada societies, in cooperation with ACM SIGAda and Ada Spain, and it was organized by members of the University of Cantabria and the Technical University of Madrid, in Spain. This was the 19th consecutive year of Ada Europe conferences, which have always been the main Ada events in Europe, with their counterparts being the ACM SIGAda conferences in the USA (formerly Tri Ada). The conference is not just devoted to the Ada language, but rather to the more general area of reliable software technologies. In this sense, there are papers on formal methods, testing, software architectures and design, software engineering tools, etc. We believe that the role of reliable software technologies is becoming increasingly important, as computer applications control more and more of our everyday systems. The goal of our conference is to contribute to advancing the state of the art of all the technologies that help us in achieving better and more reliable software at a lower overall cost. |