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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3190
Disciplina	620.00420285
Soggetti	User interfaces (Computer systems) Engineering Engineering design Computer communication systems Software engineering Operating systems (Computers) User Interfaces and Human Computer Interaction Engineering, general Engineering Design Computer Communication Networks Software Engineering Operating Systems
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	CD1: Cooperative Design 1 -- Development of a Cooperative Integration System for AEC Design -- Observing Architectural Design: Improving the Development of Collaborative Design Environments -- Visualisation of Semantic Networks and Ontologies Using AutoCAD -- Mediating Collaborative Design for Constructing Educational Virtual Reality Environments: A Case Study -- CV1: Cooperative Visualization 1 -- openVisaar: Enriching Cooperative Visualization by Combining Open Technologies -- Multimodal Interaction in a Collaborative Virtual

Brainstorming Environment -- Cooperative Visualization Framework Based on Video Streaming and Real-Time Vectorial Information -- CE1: Cooperative Engineering 1 -- Experiences in Product, Process, and Facility Development: A Case of Study -- Implementing Collaborative Engineering Environments Through Reference Model-Based Assessment -- A Modularity Framework for Concurrent Design of Reconfigurable Machine Tools -- CD2: Cooperative Design 2 -- A Cooperative Design Environment Using Multi-Agents and Virtual Reality -- Using Specifications to Build Domain-Independent Collaborative Design Environments -- Fostering Creativity in Cooperative Design -- CE2: Cooperative Engineering 2 -- Design and Manufacturing Assistance Tool for Drawing Sheet Metal Parts -- The Method of Unified Internet-Based Communication for Manufacturing Companies -- Constructing a Global and Integral Model of Business Management Using a CBR System -- CV2: Cooperative Visualization 2 -- 'Under Construction': The Potential of a Web Based Application in Managing and Maintaining Large Area Urban Modelling -- Interest Management for Collaborative Environments Through Dividing Their Shared State -- CD3: Cooperative Design 3 -- Using Simulation, Collaboration, and 3D Visualization for Design Learning: A Case Study in Domotics -- A Virtual Reality Framework for RC Building Design and Construction Cooperation -- Cooperative Design for Artistic Performances -- CA: Cooperative Applications -- GEMMA: A Cooperative Control System to Collect Environmental Marine Waste -- Comparison of Real-Time Text Chat and Collaborative Editing Systems -- Design of Cooperative Agents for Mobile Devices -- A Building Maintenance Decision Tool for PFI Projects -- CV3: Cooperative Visualization 3 -- Collaborative Role Management for Sharing Protected Web Resources -- Envisioning Environmental Futures: Multi-agent Knowledge Generation, Frame Problem, Cognitive Mapping -- A Hierarchical Visualization Tool to Analyse the Thermal Evolution of Construction Materials.

## Sommario/riassunto

As the complexity of design, visualization and engineering increases rapidly, single-user's effort is no longer enough to accomplish ever-growing requirements. Group effort becomes essential. There are many industrial areas that demand strong CDVE support such as mechanical engineering, aerospace engineering, architecture design, engineering and building construction (AEC), etc. There are numerous other application areas where cooperative and concurrent working is becoming popular, such as entertainment program development, networked gaming, simulation, collaborative learning, etc. Successful cooperative design, visualization and engineering highly depend on the advances in fundamental research areas such as concurrent processing, middleware, agent-based methods, design patterns, distributed systems, databases, transport protocols in network communication, human machine interaction, group behavior ..., just to name a few. There is a very tight relationship between cooperative design, visualization and engineering. Cooperative design will become impossible without cooperative visualization while cooperative engineering processes would not be complete without cooperative design and visualization. From my research experience in the field since 1996 in the Spanish National R & D Project CICYT TEL 96-0544, 3D Cooperative Design System (Sistemas Cooperativos de Diseo en 3D), up to the European Esprit (IST) Project No.