Table of Contents

Ambiguity in Multimodal Interaction with Multi-touch Multi-user Graphics Tables	1
Jean-Paul A. Barthès, Alistair Jones, Atman Kendira, Dominique Lenne, Claude Moulin, and Thierry Gidel	
WorkMail: Collaborative Document Workflow Management by Email Davide Gazzè, Mariantonietta N. La Polla, Andrea Marchetti, Maurizio Tesconi, and Andrea Vivaldi	14
Real-Time Mobile Distance Learning System for Smartphone	24
Cooperative Information Management of Degradation of Structures in Operation and Management	33
Real-Time Resource Location Tracking in Building Information Models (BIM)	41
Cooperative Integration of Product Model and Sensor Data Model for Knowledge Discovery	49
Cooperative Decision Making Algorithm for Large Networks Using MapReduce Programming Model	53
Enabling Cooperative Educational Game Design on the Web	57
Learning Computer-Mediated Cooperation in 3D Visualization Projects	65
Real-Time Stereoscopic Streaming of Medical Surgeries for Collaborative eLearning	73
Scalable Integration of Multiple Health Sensor Data for Observing Medical Patterns	78
Hugo Sereno Ferreira, Tiago Boldt Sousa, and Angelo Martins	



Collaborating Using Intergroup Communications in Group-Based Wireless Sensor Networks: Another Way for Saving Energy Miguel Garcia, Diana Bri, Jaime Lloret, and Pascal Lorenz	85
Empirical Evidence of Tags Supporting High-Level Awareness	94
Rough Sets Methods for Working with Uncertainty	102
Project Proposals Ranking Based on Closed Sets Properties	110
What Do Strokes Teach us about Collaborative Design?	114
Communication between Physical and Virtual Models in Designing	
Smart Buildings	126
Cased-Based Reasoning Based on Extension Theory for Conflict	
Resolution in Cooperative Design	134
The Role of a City's Collective Memory in Supporting Cooperative Urban Design Learning	143
Simulation and Optimization in Collaborative Ship Design: Innovative	
Approach	151
Ronda: A Fine Grained Collaborative Development Environment Fernando Olivero, Michele Lanza, and Marco D'ambros	155
A Collaborative Expandable Framework for Software End-Users and	
Programmers	163
Fostering Collaboration in Software Development through a Visual	
Assistant to Unit Testing	167
Cooperative Access to Hierarchical Data from Biotechnological	
Pilot-Plant	171

Table of Contents	XI
A Study on Cooperative Community in Enterprise Cluster Based on Fuzzy Clustering	179
A Virtual Assembly Fat Model for Cooperative Assembly Processes of Large-Scale Product	187
Urban Infoscape for Sustainable Lifestyle of Smart Green City Yoon Choe, Ingeun Yi, Yumi Song, and Sung-Ah Kim	195
Cooperative Information Sharing between a 3D Model and Structural Analysis Software for Railway Viaducts	203
A Zoomable Location-Based Dashboard for Construction Management	207
Collaborative System for HK-BEAM Green Building Certification Jack C.P. Cheng and Vignesh Venkataraman	211
A Metamodel to Describe nD CAD Visualization as Coordinated Multiple Views	219
Collaborative Visualization of Environmental Simulation Result and Sensing Data Using Augmented Reality	227
Availability of Mobile Augmented Reality System for Urban Landscape Simulation	231
Tracking of the Subject Body Using Measurement of Active Quantity and Extraction of Color-Information	239
A Visualization System for the Comfort Analysis of Modular Architecture: A Case Study	247
Incorporating H&S into Design and Construction: The Case for Integrating Serious Games Engines Technologies and 4D Planning for Collaborative Work Nashwan Dawood, Jeoffrey Miller, and Nobuyoshi Yabuki	255
Author Index	265