# Table of Contents

## Keynote

How Do Developers Meet Users? – Attitudes and Processes in Software Development .......................................................... 1  
*Jan Gulliksen*

## HCI Research

Validity and Cross-Validity in HCI Publications ............................................. 11  
*Harold Thimbleby*

## Critical Systems

Model-Based Engineering of Widgets, User Applications and Servers Compliant with ARINC 661 Specification ....................................................... 25  
*Éric Barboni, Stéphane Conversy, David Navarre, and Philippe Palanque*

Usability Requirements for Improving the Infection Module of a Hospital Intensive Care Unit Information System ......................... 39  
*Mónica Sara Santos, João Falcão e Cunha, and Altamiro da Costa Pereira*

Interaction Walkthrough: Evaluation of Safety Critical Interactive Systems ................................................................. 52  
*Harold Thimbleby*

## Model Based Development

Collaborative Social Structures and Task Modelling Integration ............... 67  
*Victor M.R. Penichet, Fabio Paternò, J.A. Gallud, and Maria D. Lozano*

Towards Model-Driven Development of Staged Participatory Multimedia Events .......................................................... 81  
*Jan Van den Bergh, Steven Huypens, and Karin Coninx*

Integrating Support for Usability Evaluation into High Level Interaction Descriptions with NiMMiT ......................................................... 95  
*Karin Coninx, Erwin Cuppens, Joan De Boeck, and Chris Raymaekers*
Cognitive Aspects of Interaction

An Investigation into the Validation of Formalised Cognitive Dimensions ......................................................... 109
Chris Roast and Babak Khazaei

Formal Modelling of Cognitive Interpretation ............................... 123
Rimvydas Rukšėnas, Paul Curzon, Jonathan Back, and Ann Blandford

Use of Models

Combining Formal Methods and Functional Strategies Regarding the Reverse Engineering of Interactive Applications ......................................................... 137
J.C. Silva, José Creissac Campos, and João Saraiva

An Ontological Approach to Visualization Resource Management ...... 151
Richard Potter and Helen Wright

Visual Design of User Interfaces by (De)composition .................. 157
Sophie Lepreux, Jean Vanderdonckt, and Benjamin Michotte

Haptics and Multimodality

Exploring the Specification of Haptic Interaction .......................... 171
Shamus P. Smith

Analysis of Pointing Tasks on a White Board ............................ 185
G. Faconti and Micke Massink

Prototyping and Evaluation

Mixed-Fidelity Prototyping of User Interfaces ................................ 199
Jennifer N. Petrie and Kevin A. Schneider

María Paula González, Toni Granollers, and Jesús Lorés

Rapid User-Centred Evaluation for Context-Aware Systems ........... 220
Eleanor O’Neill, David Lewis, Kris McGlinn, and Simon Dobson

Supporting User Interface Development

Using a Patterns-Based Modelling Language and a Model-Based Adaptation Architecture to Facilitate Adaptive User Interfaces ................ 234
Erik G. Nilsson, Jacqueline Floch, Svein Hallsteinsen, and Erlend Stav
Toward Quality-Driven Development of 3D Computer Games .......... 248
T.C. Nicholas Graham and Will Roberts

Group Discussions

Processes: Working Group Report ........................................... 262
Stéphane Chatty, José Creissac Campos, María Paula González,
Sophie Lepreux, Erik G. Nilsson, Victor M.R. Penichet,
Mónica Santos, and Jan Van den Bergh

Usability and Computer Games: Working Group Report ................. 265
T.C. Nicholas Graham, Paul Curzon, Gavin Doherty,
Philippe Palanque, Richard Potter, Christopher Roast, and
Shamus P. Smith

Author Index ................................................................. 269