CONTENTS

Preface .......................................................................................................................... IX
Scientific Programme .................................................................................................... 1
Author Listing .................................................................................................................. 117

GAME DESIGN

Interactivity in Computer Games
Barbaros Bostan, Gökhan Şahin and Mehmet Can Üney ............................................. 5

Comparative Analysis on Game Design Pattern Collections
Tapani N. Liukkonen, Olli I. Heimo, Tuomas Mäkilä and Jouni Smed .......................... 10

Translating a Modern Film and TV Screening Room to an Integrated Game Engine Production Environment
Oliver Engels and Robert Grigg ....................................................................................... 18

INTERACTIVE EDUCATIONAL GAME DESIGN

Serious Game Creation in Teaching Content
Merikki Lappi and Esa Lappi .......................................................................................... 25

XIMPEL in Education – Inspiring Creativity through Storytelling and Gameplay
S.V. Bhikharie and A. Eliëns ............................................................................................. 30

Some Reflections on Bolognese Food: A Digital Perspective, with a lot of Fun
Marco Roccetti, Silvia Colombini and Marco Zanichelli ................................................. 34

VIRTUAL GAMING TRAINING ENVIRONMENTS

Virtual Reality Situational Language Trainer for Second Language Design & Evaluation
Timo Korkalainen, Juho Pääkylä, Tapani N. Liukkonen, Lauri Järvenpää, Tuomas Mäkilä, Yrjö Lappalainen and Heli Kamppari ....................................................... 41

Evaluation of a Virtual Training Environment for Aggression De-escalation
Tibor Bosse, Charlotte Gerritsen and Jeroen de Man .................................................... 46
CONTENTS

GAME AI

STARCAST II Build Item Selection with Semantic Nets
Andreas Stiegler, Keshav Dahal, Johannes Maucher
and Daniel Livingstone.........................................................55

Developing Trainable Bots for a Mobile Game of Tennis
Maxim Mozgovoy, Akane Yamada and Iskander Umarov..................60

A Simple Hybrid Algorithm for Improving Team Sport AI
David King and David Edwards..................................................63

INTELLIGENT AGENTS

Proposing an Intelligent Agent for the Four-Sided Dominoes Game
using The Expectimax Algorithm
Endrews Silva, Marly Costa, Nirvana Antonio and Cicero Costa Filho ..........71

Aggressive versus Loud Virtual Agents - Investigating the influence
of sound on the stress response in the use of virtual agents
Charlotte Gerritsen and Willeke van Vught..................................79

PROCEDURAL PROGRAMMING

Procedural generation of collaborative puzzle-platform game levels
Benjamin van Arkel, Daniël Karavolos and Anders Bouwer.......................87

How to use Combinatorial Optimization Problems (Traveling Salesman
problem) for Procedural Landscape Generation
Alan Ehret and Peter Jamieson ..................................................94

ONLINE GAMING

A Server-Side Framework for the Execution of Procedurally Generated
Quests in an MMORPG
Jonathon Doran and Ian Parberry............................................101

Online Skill Level Classification of Real-Time Strategy Game Players
Jason M. Blackford and Gary B. Lamont........................................109