

# **Pervasive Gaming Applications**

A Reader for Pervasive Gaming Research vol. 2

The cover artwork for this second volume of the reader was again contributed by the Leipzig based artist Sascha Nau. It picks up the interplay of physical and virtual worlds in Pervasive Gaming. A tangible paper backdrop symbolizes the greyness of everyday life. The ordinary people of today sadly move through the scenery, unaware of the colorful and exciting virtual domain that pervades our physical reality. They appear featureless and black, just like the remainder of the physical world. Virtual participants of a Pervasive Game move through the scene in the virtual domain. They are red space pilots, equal in shape and size due to the endless design possibilities of the virtual domain, where cloning and duplicating elements is as natural as it is impossible in reality. A group of players has moved to the back of the scene. Unlike all the other physical persons, these players are not confined to the physical reality, but act as an interface between the virtual and the physical domain, unifying the colorful details of the virtual and the tangible nature of physical world. These players enjoy the unique nature of Pervasive Gaming, limited only by the imagination of the game developers who we hope to inspire with the applications presented in this volume. The artist can be contacted at [www.snau.net](http://www.snau.net).



# Table of Contents

5 - 10	<b>Prototyping Pervasive Games: A New Dimension of Complexity</b> C. Magerkurth, C. Röcker
11 - 40	<b>Socially Adaptable Games – From Pirates! to Insectopia</b> S. Björk, J. Peitz, J. Holopainen, P. Ljungstrand
41 - 66	<b>The Augmented Knight’s Castle</b> M. Lampe, S. Hinske
67 - 84	<b>Designing User-Friendly Interfaces for Pervasive Gaming Applications</b> C. Röcker, C. Magerkurth, S. Hinske, M. Lampe
85 - 106	<b>Novel Gaming Applications for Smart Home Environments</b> C. Magerkurth, T. Engelke, C. Röcker
107 - 126	<b>Feedback in Pervasive Games</b> M. Faust
127 - 158	<b>Mixed Reality for Future Social and Physical Entertainment Systems</b> A. D. Cheok, L. Wei, K. Eng Tat, J. Teh Keng Soon
159 - 178	<b>Design Aspects of Handheld Augmented Reality Games</b> D. Wagner, D. Schmalstieg
179 - 198	<b>Paranoia Syndrome – A Pervasive Multiplayer Game</b> G. Heumer, D. Carlson, B. Jung, A. Schrader
199 - 226	<b>Mapping Inside Out</b> S. Boyd Davis, M. Moar, R. Jacobs, M. Watkins, M. Capra, R. Shackford, L. Oppermann
227 - 254	<b>Games over a Distance: Playing Together Although Apart Using Exertion Interfaces</b> F. Mueller
255 - 284	<b>REXplorer: Using Player-Centered Iterative Design Techniques for Pervasive Game Development</b> R. Ballagas, S. P. Walz
285 - 312	<b>Love City: A Text-Driven, Location-Based Mobile Phone Game Played Between 3 Cities</b> L. Oppermann, R. Jacobs, M. Watkins, R. Shackford, C. von Tycowicz, M. Wright, M. Capra, C. Greenhalgh, S. Benford
313 - 348	<b>The Authors</b>