Dr. Antonio Krüger

Universität des Saarlandes
Postfach 151150
66041 Saarbrücken
Germany

Web: *www.dfki.de/~krueger/*
E-mail: *krueger@cs.uni-sb.de*
Tel: +49-681-302-4137
Fax: +49-681-302-4136

Biography

Antonio Krüger received a Diploma in computer science and economics at Saarland University in 1995. Afterwards he joined the Saarbrücken Cognitive Science Programm and finished it with a doctoral degree in 1999.

He was early involved in several artificial intelligence projects at the German Research Center for AI (DFKI GmbH), and more recently at the AI Lab of Saarland University (Chair of Prof. Dr. Dr. hc Wolfgang Wahlster), where he is holding the position of a senior researcher at the time being.

Antonio Krüger's past and recent interests include work on intelligent graphics generation ("Smart Graphics"), especially for mobile devices. Furthermore he is interested in intelligent navigation and information systems in mobile and ubiquitous computing scenarios.

Research Interests

Antonio's main research areas are Artificial Intelligence and Computer Graphics. More recently he transfered ideas from both fields to mobile and ubiquitous computing. He is equally interested in the technical challenges that arise from this combination and the human factors that have to be respected.

In the last five years he worked especially on the automated abstraction of 3D-graphics under consideration of communicative goals. This included the generation of abstracted graphics for small screen and mobile devices.

More recently he applied the results of his research to a mobile navigation system for pedestrians (REAL) that adapts to the technical constraints of the hardware (clip-on glasses, PDA) but also to the cognitive restrictions of the user (time-pressure, limited working memory). Another focus of this research was the seamless switch between indoor- and outdoor-navigation tasks.

Antonio's broad interdisciplinary interests lead to joint work with cognitive psychologists on the semantics of way descriptions. He was also involved in the design of new hardware components (infrared sender, 3D-pointing device).

He believes that the accurate adaption of hardware and software to the cognitive limited resources of users will play a central role in the success of ubiquitous computing.

Further information can be obtained from: *w5.cs.uni-sb.de/irreal* and *w5.cs.uni-sb.de/arreal*

Recent Publications

Antonio Krüger, Jörg Baus, Andreas Butz: *Smart Graphics in Adaptive Way Descriptions for Pedestrians,* Proceedings of Advanced Visual Interfaces (AVI) 2000, Palermo, ACM Press, 2000.
www.dfki.de/~krueger/publications/avi00.ps.gz

Andreas Butz, Jörg Baus, Antonio Krüger: *Augmenting Buildings with Infrared Information,* Proceedings of the International Symposium on Augmented Reality (ISAR), IEEE Computer Society Press, 2000.
w5.cs.uni-sb.de/~krueger/building.ps.gz

Andreas Butz, Jörg Baus, Antonio Krüger, Marco Lohse: *Hybrid Indoor Navigation System,* Proceedings of International Conference on Intelligent User Interfaces (IUI), ACM Press, 2001.
w5.cs.uni-sb.de/~krueger/hybrid-iui.ps.gz

Christian Kray, Jörg Baus, Hubert Zimmer, Harry Speiser, Antonio Krüger: *Two path prepositions: along and past,* Proceedings of the Conference on Spatial Information Theory (COSIT), 2001.
w5.cs.uni-sb.de/~krueger/cosit01.ps.gz

Further publications can be obtained from: *www.dfki.de/~krueger/publications.html*