

# CONVR 2011



November 3+4, 2011, Bauhaus-Universität Weimar, Germany

Proceedings of the **11<sup>th</sup>** International Conference  
on Construction Applications of Virtual Reality 2011

Bauhaus-  
Universität  
Weimar

Hans-Joachim Bargstädt | Karin Ailland

## *Colophon*

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**and the members of the organising committee**



## PREFACE

We are very pleased to hold the 11th International Conference on Construction Applications of Virtual Reality ([www.CONVR2011.com](http://www.CONVR2011.com)) this year in Germany. The CONVR started in 2000, and the conferences have been held in Teesside, UK (2000), Chalmers, Sweden (2001), Blacksburg, VA USA (2003), Lisbon, Portugal (2004), Durham, UK (2005), Orlando, FL USA (2006), Penn State, Pa USA (2007), Kuala Lumpur, Malaysia (2008), Sydney, Australia (2009) and Sendai, Japan (2010). So we are proud to invite you this year to Weimar, the European cultural capital of 1999 and the founding city of the worldwide known Bauhaus.

The Bauhaus school was founded by Walter Gropius in 1919 in Weimar. In this period other famous modern architects, artists and craftsmen like Johannes Itten, Paul Klee, Wassily Kandinsky and László Moholy-Nagy were active and teaching in Weimar. The "Bauhaus" was the concept of harmony between the function of an object or a building and its design. It tried to unite arts and crafts in order to generate added value to our living environment.

Thus by transferring the basic idea and the ideals of the former Bauhaus to current time technology, we are challenged by concepts of developing new media and using new media tools and knowledge for architectural and engineering purposes. Also these new media, especially virtual and augmented reality, facilitate the transfer of our ideas to the customer, to the users of modern real estates and infrastructure buildings, to the inhabitants of our sheltered urban spaces.

In response to our Call for Papers we received 123 abstracts from authors of 23 different countries. 80 papers have been accepted by the International Scientific Committee, based on a two phase review process. In the first phase two experts reviewed the abstracts, accepting, accepting with commentaries or rejecting the abstracts. In the second phase again two randomly assigned experts reviewed the full papers. Finally 76 papers were accepted by the committee, they – and the key note papers – will be presented during the conference.

***Hans-Joachim Bargstädt (Chair Bauhaus-Universität Weimar)***

***Karin Ailland (Co-Chair Bauhaus-Universität Weimar)***

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We would like to express our sincere gratitude to all authors for their enthusiasm in contributing their research as published in the proceedings and as presented during the conference. We are also deeply grateful for the big effort, which the International Scientific Committee put into the reviewing and consulting process ahead of the conference.

For the numerous support in organizing the conference and composing the final program layout we give our warm thanks to the CONVR2011 organizing committee. They have helped us in selecting a suitable pattern through the vast amount of very interesting research subjects within the scope of the conference. Also many helpers from the Bauhaus-Universität Weimar as well as others from the service units at the Weimarhalle will help to make the conference a memorable event.

We very gratefully thank our sponsors for supporting the CONVR2011 and the idea of exchanging ideas and results on construction applications of virtual reality. They are:



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