Travelling Conferences

1. Dr.-Ing. Uwe Wössner

Institution:
High Performance Computing Center Stuttgart (HLRS), University of Stuttgart, Stuttgart

Presentation title:
Collaborative immersive visualization and interactive simulation for spatial planning

CV:
Since 2004, Uwe Woessner is heading the visualization department at the High Performance Computing Center Stuttgart (HLRS). He received his PhD. in Mechanical Engineering from the University of Stuttgart in 2009. Since 1996 he is working in the Collaborative Research Center "Rapid Prototyping" established at the University of Stuttgart in the field of VR based virtual and augmented prototyping. He is guest professor and guest lecturer at the IFOER and ITE, TU-Vienna, Austria and at HSR, Rapperswil, Switzerland. He is also Co-founder of VirCinity GmbH. He received international Awards such as the 2003 HPC Challenge and 2006 HPC Bandwidth Challenge. His current research interests include collaborative virtual environments for scientific visualization, Augmented Reality, 3D user interfaces and interaction techniques for computational steering. He is in the committee of several VR and 3D User Interface related conferences such as IEEE VR, IEEE Vis, EuroVR, GI VRAR.

Publications:

- U. Wössner, J. Schulze-Döbold: Remote Volume Rendering for Virtual Environments using PC Clusters, VR-Cluster '03: Workshop on Commodity Clusters for Virtual Reality, IEEE VR, Los Angeles, March 22-26, 2003, Association, ISBN 3-905673-07-X, pp. 249-254.
- U. Wössner, J. Kieferle: Interaction Methods for Architecture in Virtual Environments, Proc of the eCAADe 2004, Copenhagen,Denmark, 2004.
- U. Wössner, M. Becker: Tangible interfaces for interactive flow simulation, The 2nd Russian-German Advanced Research Workshop on Computational Science and High Performance Computing Stuttgart, March 14-16, 2005.
- U. Wössner: Virtuelle und hybride Prototypen in kooperativen Arbeitsumgebungen, Dissertation, ISSN 0941 - 4665 Juni 2009 HLRS-07.
- Voigt, J. Kieferle, U. Wössner: Urban-spatial Experiments with Digital City Models in a Multi-dimensional VR-Simulation Environment (“Urban Experimental Lab”), SIGraDi 2009, Sao Paulo, Brazil, November 2009.
- M. Berge, J. Buchholz, L. Cupertino, G. Da Costa, A. Donoghue, G. Gallizo, M. Jarus, L. Lopez, A. Oleksiak, E. Pages, W. Piątek, J.-M. Pierson, T. Piontek, D. Rathgeb, J. Salom, L. Sisó, E. Volk, U. Wössner, T. Zilio: CoolEmAll: Models and Tools for Planning and Operating Energy Efficient Data Centres. Handbook on Data Centers. pp. 191-245. Springer, 2015.
- N. Melnikova, S. Orlov, N. Shabrov, V. Kiev, A. Kuzin, M. Resch, U. Woessner, M. Aumüller: \CAVE\ 3D: Software Extensions for Scientific Visualization of Large-scale Models. Procedia Computer Science. 66, 679-688, 2015.
- J. Kieferle, U. Woessner: BIM Interactive - About combining BIM and Virtual Reality - A Bidirectional Interaction Method for BIM Models in Different Environments. Proceedings of the 33rd eCAADe Conference. pp. 69-75. , Vienna University of Technology, Vienna, Austria, 2015.

2. Dipl.-Ing. Günter Wenzel

Institution:
Fraunhofer Institute for Industrial Engineering (IAO), Stuttgart

Presentation title:
Visualization for Public Participation Procedures - Report of the German research project VisB+

Abstract:
The language of the engineer is the drawing, but often these drawings are 'un-readable' for lay people. Therefore, these drawings must be 'translated' into more easily accessible visualizations. How these visualizations should look, which visualization techniques owners, politicians, and local authorities could implement, and what effects result, has not been studied to date. This is the objective of the current research project VisB+. For a broad scope of visualization techniques ranging from conventional architectural drawings to physical models to 3D digital models to the use of immersive building prototypes, a guideline for visualizations as well as an evaluation of existing visualization techniques and adaptation of these methods for public participation procedures is missing. These kinds of visualization techniques for design, evaluation, and simulation of construction materials, elements, systems, and methods are increasingly becoming a central requirement to ensure the success of public participation procedures. Based on this background, the project VisB+ connects these three separate aspects: Visualization & communication management, BIM / 5D, Virtual Reality.

CV:
- 2000 Diploma in Architecture and Urban Planning from Stuttgart University
- since 2000 employed as researcher and project manager at the Competence Center Virtual Reality and responsible for the exploitation of interactive visual technologies for the communication among all stakeholders involved in a building live cycle.
- since 2008 Responsible for national and international projects on BIM as a holistic methodology for capturing the whole live cycle of buildings.
- since 2013 Initiator and leader of industrial committee for virtual technologies in construction in cooperation with the Virtual Dimension Center Fellbach. Founder of the BIM-Cluster Stuttgart as a representative for research and active member in main networks like e.g. buildingSMART
- since 2014 Assistant lecturer at the University of Stuttgart (Institute of Construction Management) and at the University of Hohenheim (KOMM Institute) in the discipline of Virtual Technologies in Construction and Visualization in Public Participation
- April 2016 Head of Competence Team Virtual Environments

Publications:
- H.-J. Bullinger, W. Bauer, G. Wenzel, R. Blach: Towards user centred design (UCD) in architecture based on immersive virtual environments. Computers in Industry 01/2010.
- G. Wenzel: Effizientes Zusammenspiel – Virtual Reality Lösungen und 3D-Visualisierung im Bauwesen. Bauen Aktuell 01, 2014, 26-28.
- F. Brettschneider, G. Wenzel et al.: Visualisation for Public Participation Procedures in Major Infrastructure and Industrial Projects. 5D Conference Lake Constance, 05/2015.

3. Dipl.-Ing. Mike Letzgus

Institution:
Fraunhofer Institute for Industrial Engineering (IAO), Stuttgart
Institute of Human Factors and Technology Management (IAT), University of Stuttgart, Stuttgart

Presentation title:
Participation in Crisis? Why we need smart planning for smart cities?

CV:
Mike Letzgus studied architecture and urban planning at the University of Stuttgart and the University of São Paulo. After his study he worked a few years in diverse architecture offices. Since 2016 he is research associate at the Institute of Human Factors and Technology Management (IAT), University of Stuttgart. At Competence Center Urban Systems Engineering he works on the development of future and innovative technology competence for the urban planning. Current he is the project leader of a research project “Reallabor Stadt:quartiere 4.0”, in Engl. “Real-lab city: quarter 4.0”.

4. Prof. Dipl.-Ing. Joachim B. Kieferle

Institution:
RheinMain University of Applied Sciences, Wiesbaden

Presentation title:
VR and BIM Interactive: Planning City Elements in Virtual Environments

CV:
Since 2002 Professor Joachim B. Kieferle is researching and teaching at RheinMain University of Applied Sciences in the field of Digital Design and Fabrication with a focus on Augmented and Virtual Reality. In 1992 he received his diploma in Architecture and Urban Planning from Stuttgart University, where he started to work as research assistant from 1995. Besides his academic career, he's running his own practice which also has one main focus on VR. As an architect he has worked in Germany, United States, Saudi Arabia and Switzerland both in architecture offices and construction companies. Joachim Kieferle has been invited as guest professor at TU Vienna and also taught at Hochschule Rapperswil. He is the current president of eCAADe (Education and research in Computer Aided Architectural Design in Europe).

5. Dipl.-Ing. Timo Kegel

Institution:
Urban Design Institute (SI), University of Stuttgart, Stuttgart

CV:
Timo Kegel is architect, urban planner and assistant professor for urban planning and design. He studied architecture and urban design at the University of Stuttgart and obtained his diploma in architecture and urbanism in 2005. During his studies he received the student award Rudolf Lodders Preis in 2003 and worked in several architecture and urban planning offices.
After graduation in 2005, he worked on various multidisciplinary projects with Auer Weber Assoziierte, Kienleplan, PeschPartner and Metaraum and has been a member of the German Chamber of Architects since 2012. His work experience with award-

winning practices has ranged from visualizing architecture, public space design to the scale of urban framework plans.
Beside to his professional practice he started teaching at the University of Stuttgart in 2007. Since 2010 he is teaching and research staff member at the Institute of Urban Planning and Design of University of Stuttgart. He has been part of many interdisciplinary workshops and excursions in Europe. With many years of teaching he is experienced in conceptualising and running seminars for architecture and urban design students. His research and teaching span the fields of strategic urban framework planning (Masterplan Campus2030), informal urban development and climate change adaptation in urban areas.
Since 2016 he is research associate at the Institute of Urban Planning and Design within the frame work of the research project “Reallabor Stadt:quartiere 4.0”.

6. M.Sc. Anna Kübler

Institution:
Urban Design Institute (SI), University of Stuttgart, Stuttgart

CV:
Anna Kübler earned her Bachelor of Science in architecture and urban planning in 2013 at the University of Stuttgart. During her studies she worked on the connection between urban planning and architecture, which she finished with an integrated project about flood and living in the riverscapes. Subsequently she started to focus on the conceptual and strategical urban planning and the interplay of actors.
In 2015 she made her Master of Science in architecture and urban planning with excellent distinction at the Institute of Unit Urban and Regional Planning at the University of Stuttgart, also with the focus on urban planning. Aim of her master thesis: what if..? sharing would take place was to search for ways to share in the city of Stuttgart. She has been part of many interdisciplinary workshops and excursions in Peru, the Netherlands and Spain.
From 2009 till 2015 she gained professional experiences in different offices like Lehen drei, Stuttgart, Gmür & Geschwentner Architekten AG, Zürich and as a student assistant at Masterplan Campus2030.
2016 she started to work at the office of UTA// architecture and urban planning and also as a research associate at the Institute of Urban Planning and Design at the University of Stuttgart at the research project “Reallabor Stadt:quartiere 4.0”.

7. Dipl.-Des. Myriam Guedey

Institution:
High Performance Computing Center Stuttgart (HLRS), University of Stuttgart, Stuttgart

CV:
Myriam Guedey studied design at the University of Art and Design in Offenbach am Main. Her major fields of study were product design, 3D design and human computer interaction. After her study she worked in a design office. Since 2016 she works as a research associate in the department of Visualization at HLRS on the research project „Reallabor Stadt:quartiere 4.0“.

8. M.Sc. Jing Zhang

Institution:
High Performance Computing Center Stuttgart (HLRS), University of Stuttgart, Stuttgart

CV:

Jing Zhang received her Master of Science in mechanical engineering at the Paderborn University in 2010. Between 2011 and 2014 she worked for her PhD thesis in the field of the development of the droplet condensation model with the CFD code ANSYS CFX at the Institute of Nuclear Technology and Energy Systems (IKE), the University of Stuttgart. Since 2015 she works in the department of Numerical Methods and Libraries at HLRS.

Publications:

- J. Zhang, E. Laurien: 3D Numerical Simulation of Flow with Volume Condensation in Presence of Non-condensable Gases inside a PWR Containment, in High Performance Computing in Science and Engineering '14, Cham, Springer, pp. 479-497, 2014.
- J. Zhang, E. Laurien: Numerical Simulation of Flow with Volume Condensation in a Model Containment, in High Performance Computing in Science and Engineering '13, Cham, Springer, pp. 477-492, 2013.