



# Faculty of Computer Science 2007–2008 Seminar Series

## Visualizations in PC-based Virtual Environments

By

### Rainer Herpers

Professor at the Bonn–Rhein–Sieg University of Applied Sciences for the Department of Computer Science located in Sankt Augustin, Germany and also an Adjunct Professor at York University for the Department of Computer Science and Engineering

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*2:30pm*

*ITC317*

Virtual Environments (VEs) enable immersive visualizations in many application areas. For that the observer enters a physical space composed of multiple seamlessly joined projection screens. Adapted interaction devices enable the manipulation of and/or navigation in the multi-dimensional virtual space. In past years VE technology has been standardized so that they are more and more entering industrial applications in particular in design, construction, and development areas. After a short review of the history of VE -- systems a PC based virtual environment developed at the Bonn–Rhein–Sieg University called "Immersion Square" is introduced.

Immersion Square's hardware configuration is based on standard PC technology. The underlying design principle of the Immersion Square technology is using standard software and hardware components wherever it is possible to keep investments low. This strategy is continued in the fields of content generation and of additional features such as stereoscopic visualizations.

Therefore, in the second part of the presentation details about research results in the development of methods of an easy content generation by alignment of video data as well as the realization of stereoscopic visualizations by applying anaglyph technology is given. Upon request an additional section on joint research in hiding graphic updates during long saccadic eye movements can be given.

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**STUDENTS ARE ENCOURAGED TO ATTEND**

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