



The Future of Rendering for Virtual / Interactive Environments

**A Special Track of the
5th International Symposium on Visual Computing (ISVC09)**

<http://www.isvc.net>

Scope:

Traditionally, Virtual Environments employ scene graph APIs and graphics hardware for the rendering task. Using modern graphics hardware, many effects can be simulated through the use of shaders. However, shaders have certain limitations when it comes to global illumination solutions and the available rendering primitives.

Due to the introduction of parallel hardware architectures and recent advances in software based rendering, this type of visualization is becoming more and more feasible. With software based rendering, the developer is at full control of the rendering algorithm. The right renderer can be chosen for a desired quality, speed, primitives to render etc. But still we face many challenges, like there is no standard hardware to develop on. One can select from a variety of hardware, like clusters of workstations, many-core CPUs, graphics processing units (GPUs) or special processors, like the Cell Broadband Engine. In addition, several programming, shading and computing languages / APIs are competing for users. There is yet no standard shading language that can be used for ray tracing and rasterization efficiently. Integration of 3D graphics into an application is still an involved task and done by graphics experts.

These statements hold for movies, games with real-time graphics and interactive environments, like virtual realities, where new technologies are needed that can cope with all their requirements.

The special track on the Future of Rendering for Virtual / Interactive Environments plans to bring together researchers from the field of VR, interactive environments, games, parallel rendering, software and hardware architectures, to present current work on the topic and to discuss new ways to deal with upcoming possibilities and challenges.

Topics:

The topics of interest include but are not limited to the following areas:

- Parallel rendering for interactive environments / VR / games
- Modular VR / gaming frameworks and their use of renderers
- Renderers for interactive environments: From mobile devices to immersive VR systems
- Server-based rendering approaches
- Modeling and data acquisition for future rendering architectures
- Renderers for large model visualization
- Rendering middle-ware for many-core architectures and clusters
- Hardware platforms for future rendering
- Rendering requirements for future interactive / VR - applications

Paper Submission Procedure:

Papers submitted to ISVC 2009 Special Track must not have been previously published and must not be currently under consideration for publication elsewhere. Manuscripts should be submitted in camera-ready format and should not exceed **12 pages**, including figures and tables (see <http://www.isvc.net> for details). All papers accepted will appear in the symposium proceedings which will be published by **Springer-Verlag** in the **Lecture Notes in Computer Science (LNCS)** series.



Important Dates:

Paper submissions	July 10, 2009
Notification of acceptance	August 31, 2009
Final camera ready paper	September 14, 2009
Advance Registration	September 14, 2009
ISVC09 Symposium	November 30 - December 2, 2009

Organizers:

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