Proceedings

High-Performance Graphics 2013

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Table of Contents

Table of Contents

Ray Tracing Hardware and Techniques

Preface

We are delighted to present the proceedings of High Performance Graphics 2013. This is the fifth year of the conference, which has become the leading international conference on graphics hardware, systems, and algorithms. The conference brings together researchers, engineers, and architects to discuss the complex interactions of parallel hardware, novel programming models, efficient graphics algorithms, and innovative applications.

High Performance Graphics (HPG) was founded in 2009 to synthesize and expand on two important and well-respected conferences in computer graphics: Graphics Hardware, an annual conference focusing on graphics hardware, architecture, and systems since 1986; and Interactive Ray Tracing, an innovative symposium begun in 2006 focusing on the emerging field of interactive ray tracing and global illumination. By combining and expanding these two communities, we bring to authors and attendees the best of both fields and a conference covering a broad range of interactive 3D graphics systems and algorithm research.

This year's proceedings continue to reflect this tradition of synthesis. Ray tracing has again emerged as a popular topic, and HPG 2013 includes papers on new algorithms for efficiently constructing and traversing ray tracing acceleration structures as well as complementary papers detailing specialized hardware designs for ray tracing. The conference includes papers on classic graphics hardware topics, such as advanced rasterization and real-time shadowing, as well as increasingly important topics such as interactive voxelization and reconstruction. In all 44 papers were submitted to HPG 2013, of which 15 were accepted for an acceptance rate of about 34%.

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