SIGGRAPH 2001

EXPLORE INTERACTION AND DIGITAL IMAGES

Papers

Awards

Dedication

Credits

August 12 - 17, 2001
Los Angeles, California

Conference Proceedings

Help

PROCEEDINGS

Animation and Expression

Hands and Words

Hardware and Hardware Rendering

Illumination and Texture

Image-Based Modeling and Rendering

Images and Image-Based Techniques

Images and Texture

Measurement and Presentation

Meshes

Natural Animation

Point-Based Rendering and Shadows

Procedural Modeling

Reality-Based Modeling

Sound Simulation and Animation

The Interaction of Light and Matter

Volumetric and Graphing Techniques

Animation and Expression

Automating Gait Animation

Composable Controller for Physics-Based Character Animation

Expression Cloning

Expressive Expression Mapping With Ratio Images

Hands and Words

BEAT: The Behavior Expression Animation Toolkit

DAB: Interactive Haptic Painting With 3D Virtual Brushes

Project FEELEX: Adding Haptic Surface to Graphics

Wordseye: A Text-to-Scene Conversion System

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A User-Programmable Vertex Engine

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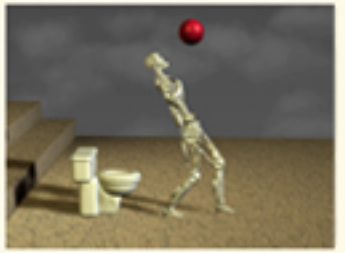


Composable Controller for Physics-Based Character Animation

Petros Faloutsos, Michiel van de Panne, Demetri Terzopoulos

New York University and University of Toronto

Expressive Expression Mapping With Ratio Images

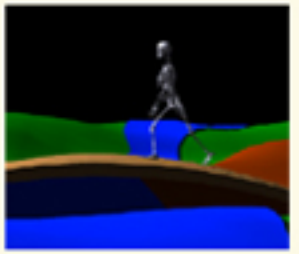
Zicheng Liu, Ying Shan, Zhengyou Zhang

Microsoft Research

Expression Cloning

Jun-yong Noh, Ulrich Neumann

University of Southern California



Automating Gait Animation

Harold C. Sun, Dimitris Metaxas

University of Pennsylvania

BEAT: The Behavior Expression Animation Toolkit

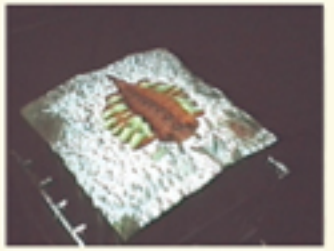
Justine Cassell, Hannes Vilhjalmsson, Tim Bickmore

Massachusetts Institute of Technology

DAB: Interactive Haptic Painting With 3D Virtual Brushes

William Baxter, Vincent Scheib, Ming C. Lin, Dinesh Manocha

University of North Carolina at Chapel Hill



Project FEELEX: Adding Haptic Surface to Graphics

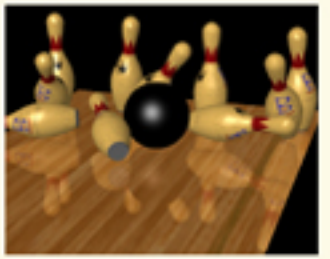
Hiroo Iwata, Hiroaki Yano, Fumitaka Nakaizumi, Ryo Kawamura

University of Tsukuba

Wordseye: A Text-to-Scene Conversion System

Bob Coyne, Richard Sproat

AT&T Labs



A Real-Time Procedural Shading System for Programmable Graphics Hardware

Kekoa Proudfoot, William R. Mark,
Patrick M. Hanrahan, Svetoslav Tzvetkov

Stanford University and NVIDIA Corporation

A User-Programmable Vertex Engine

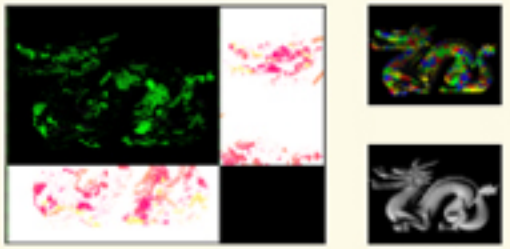
Erik Lindholm, Mark Kilgard, Henry Moreton

NVIDIA Corporation

Homomorphic Factorization of BRDFs for High-Performance Rendering

Michael D. McCool, Anis Ahmad, Jason Ang

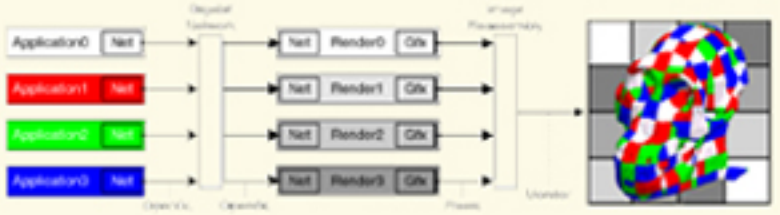
University of Waterloo



Lightning-2: A High-Performance Display Subsystem for PC Clusters

Gordon Stoll, Dan Patterson, Art Webb, Chris Caywood, Milton Taveira, Steve Hunt, Matthew Eldridge, Patrick M. Hanrahan, Steven Berman, Richard Levy

Intel Corp., Stanford University, Cornell University



WireGL: A Scalable Graphics System for Clusters

Greg Humphreys, Matthew Eldridge, Ian Buck, Matthew Everett, Patrick M. Hanrahan, Gordon Stoll

Stanford University and Intel Corporation

A Physically-Based Night Sky Model

Henrik Wann Jensen, Michael M. Stark,
Peter Shirley, Simon Premoze, Fredo Durand,
Julie Dorsey

Stanford University, University of Utah,
Massachusetts Institute of Technology

Constrained Texture Mapping for Polygonal Meshes

Bruno Levy

INRIA Loria

Photo-Realistic Rendering of Knitwear Using the Lumislice

Ying-Qing Xu, Yanyun Chen, Hua Zhong, Steve Lin, Heung-Yeung Shum, Enhua Wu, Baining Guo

Microsoft Research China

Texture Mapping Progressive Meshes

Pedro V. Sander, Steven J. Gortler, John Snyder, Hugues Hoppe

Harvard University
Microsoft Research

An Image-Based Modeling and Photo-Editing System

Byong Mok Oh, Max Chen, Julie Dorsey, Fredo Durand

Massachusetts Institute of Technology

Hybrid Stereo Camera: An IBR Approach for Synthesis of Very-High-Resolution Stereoscopic Image Sequences

Harpreet S. Sawhney, Yanlin Gu, Keith Hanna, Rakesh Kumar, Sean Adkins, Samuel Zhou

Sarnoff Corporation and IMAX Corporation

Plenoptic Stitching: A Scalable Method for Reconstructing 3D Interactive Walkthroughs

Daniel G. Aliaga, Ingrid Carlbom

Lucent Technologies, Bell Labs

Unstructured Lumigraph Rendering

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A Simple and Efficient Error-Diffusion Algorithm

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Université de Montréal

Image-Based Motion Blur for Stop Motion Animation

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Consistent Mesh Parameterization

Emil Praun, Wim Sweldens, Peter Schröder

Princeton University,
Lucent Technologies, Bell Labs,
California Institute of Technology

Simulating Decorative Mosaics

Alejo Hausner

University of Toronto

Image Analogies

Aaron Hertzmann, Charles E. Jacobs,
Nuria Oliver, Brian Curless, David H. Salesin

New York University, Microsoft Research,
University of Washington

Quilting for Texture Synthesis and Transfer

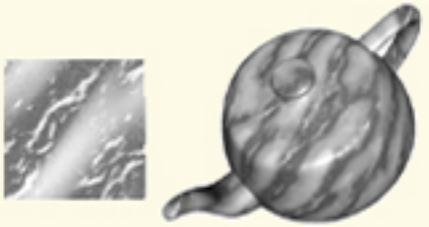
Alexei A. Efros, William T. Freeman

University of California, Berkeley,
Mitsubishi Electric Research Laboratory

Texture Synthesis on Surfaces

Greg Turk

Georgia Institute of Technology



Texture Synthesis Over Arbitrary Manifold Surfaces

Li-Yi Wei, Marc Levoy

Stanford University

Interactive Stereoscopic Display for Three or More Users

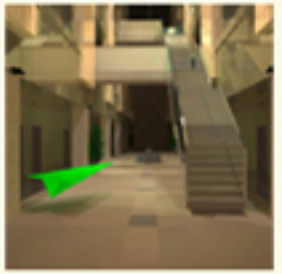
Yoshifumi Kitamura, Sumihiko Yamamoto, Fumio Kishnino, Takashige Konishi

Osaka University and Toppan Printing Co., Ltd.

Measuring and Predicting Visual Fidelity

Benjamin Watson, Alinda Friedman,
Aaron McGaffey

Northwestern University and University of Alberta



Perception-Guided Global Illumination Solution for Animation Rendering

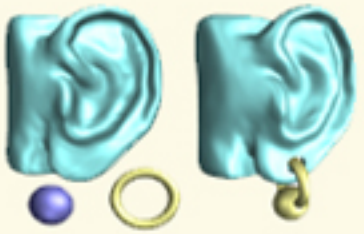
Karol Myszkowski, Takehiro Tawara, Hiroyuki Akamine, Hans-Peter Seidel

Max-Planck-Institut für Informatik

Rendering Effective Route Maps: Improving Usability Through Generalization

Maneesh Agrawala, Chris Stolte

Stanford University



Approximate Boolean Operations on Free-Form Solids

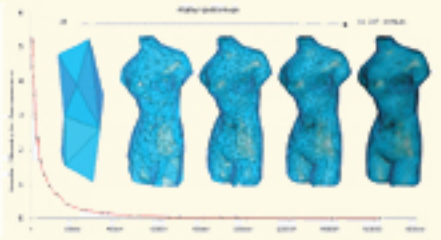
Daniel Kristjansson, Henning Biermann, Daniz Zorin

New York University

Real-Time Hatching

Emil Praun, Matthew Webb, Adam Finkelstein, Hugues Hoppe

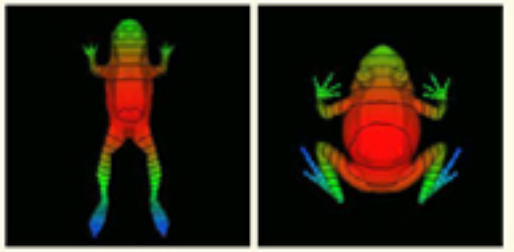
Princeton University and Microsoft Research



Progressive Compression for Lossless Transmission of Triangle Meshes

Pierre Alliez, Mathieu Desbrun

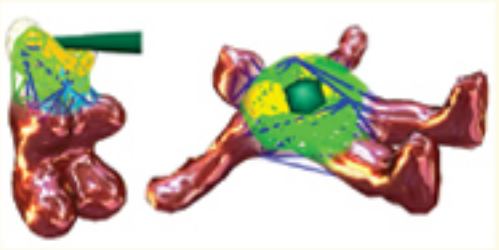
University of Southern California



Topology Matching for Fully Automatic Similarity Estimation of 3D Shapes

Masaki Hilaga, Yoshihisa Shinagawa, Taku Kohmura, Tosiyasu L. Kunii

The University of Tokyo, RIKEN (The Institute of Physical and Chemical Research), Hosei University



Dynamic Real-Time Deformations Using Space and Time Adaptive Sampling

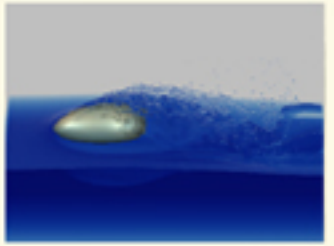
Gilles Debunne, Marie-Paule Cani, Mathieu Desbrun, Alan H. Barr

IMAGIS-GRAVIR, University of Southern California, California Institute of Technology

Optimization-Based Animation

Victor J. Milenkovic, Harald Schmidl

University of Miami



Practical Animation of Liquids

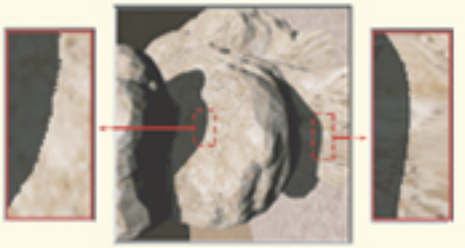
Nick Foster, Ronald Fedkiw

PDI/DreamWorks and Stanford University

Visual Simulation of Smoke

Ronald Fedkiw, Henrik Wann Jensen, Jos Stam

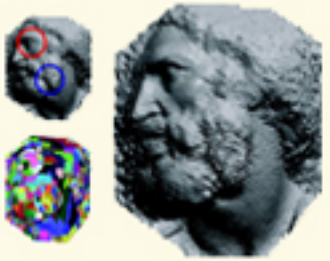
Stanford University and Alias|Wavefront



Adaptive Shadow Maps

Pemith Randima Fernando, Sebastian Fernandez, Kavita Bala, Donald P. Greenberg

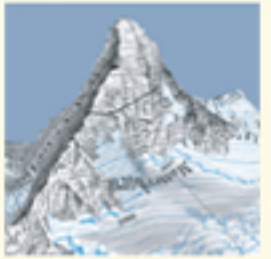
Cornell University



Spectral Processing of Point-Sampled Geometry

Mark Pauly, Markus Gross

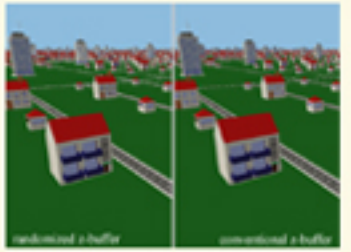
Eidgenössische Technische Hochschule Zürich



Surface Splatting

Matthias Zwicker, Markus Gross,Hanspeter Pfister, Jeroen van Baar

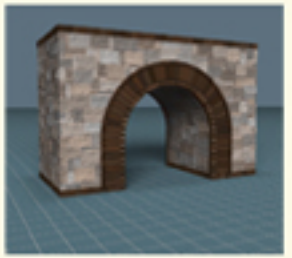
Eidgenössische Technische Hochschule Zürich, Mitsubishi Electric Research Laboratory



The Randomized Z-Buffer Algorithm: Interactive Rendering of Highly Complex Scenes

Michael Wand, Ingmar Peter, Wolfgang Strasser, Matthias Fischer

Universität Tübingen, Friedhelm Meyer auf der Heide Universität Paderborn



Feature-Based Cellular Texturing for Architectural Models

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Massachusetts Institute of Technology,
Harvard University

Integrating Shape and Pattern in Mammalian Model

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Universidade do Vale do Rio dos Sinos,University of British Columbia, Laboratoire SIC

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The Use of Positional Information in the Modeling of Plants

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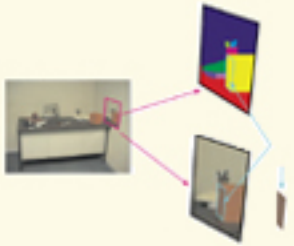


Image-Based Rendering of Diffuse, Specular and Glossy Surfaces From a Single Image

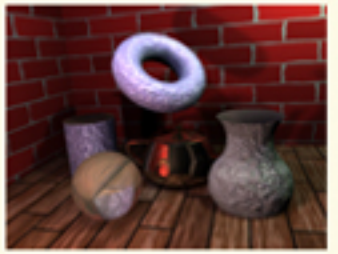
Samuel Boivin, André Gagalowicz

INRIA Rocquencourt

Scanning Physical Interaction Behavior of 3D Objects

Dinesh K. Pai, Kees van den Doel, Doug L. James, Jochen Lang, John E. Lloyd, Joshua L. Richmond, Som H. Yau

University of British Columbia



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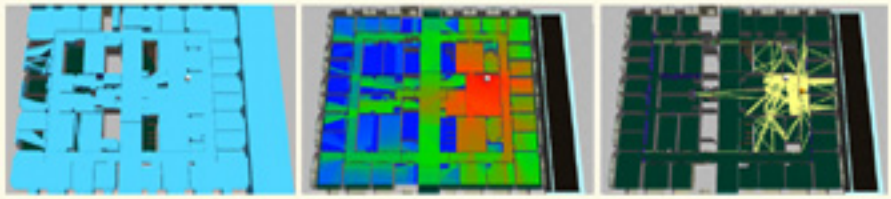
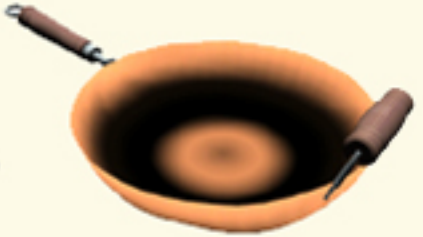


Modeling Acoustics in Virtual Environments Using the Uniform Theory of Diffraction

Nicolas Tsingos, Ingrid Carlbom, Addy Ngan
Thomas Funkhouser

Lucent Technologies, Bell Labs
Princeton University



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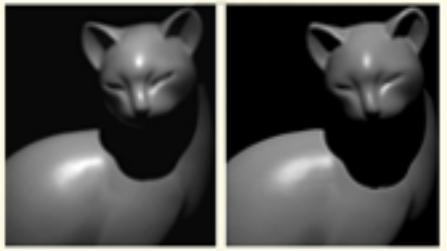
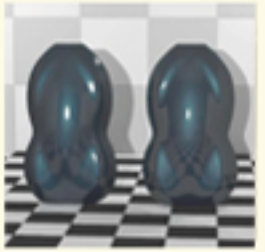


An Efficient Representation for Environment Irradiance Maps

Ravi Ramamoorthi, Patrick M. Hanrahan

Stanford University



Applying Appearance Standards to Light Reflection Models

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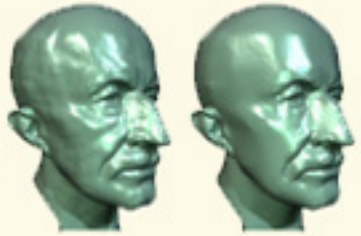
University of Oregon

Polynomial Texture Maps

Tom Malzbender, Dan Gelb, Hans Wolters

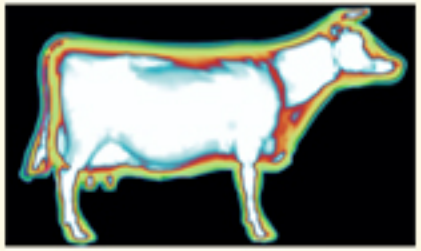
Hewlett-Packard Laboratories



Feature-Sensitive Surface Extraction From Volume Data

Leif Kobbelt, Mario Botsch, Ulrich Schwanecke, Hans-Peter Seidel

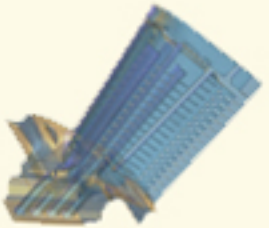
Max-Planck-Institut für Informatik,
Rheinisch-Westfälische
Technische Hochschule Aachen



Kizamu: A System for Sculpting Digital Characters

Sarah Frisken, Ron Perry

Mitsubishi Electric Research Laboratory



Reconstruction and Representation of 3D Objects With Radial Basis Functions

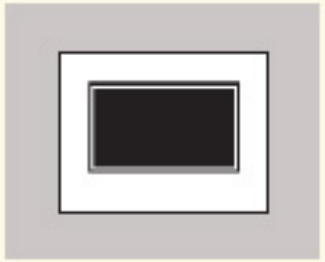
Jonathan Carr, Tim Mitchell, Richard Beatson, Jon Cherrie, W. Richard Fright, Bruce McCallum, Tim Evans

Applied Research Asso. NZ Limited, University of Canterbury

Reliable Graphing Methods for Two-Dimensional Implicit Relations

Jeff Tupper

University of Toronto



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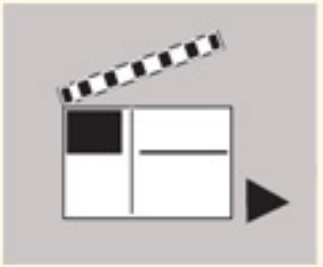

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Siggraph

Stephen N. Spencer, *Director of Publications*
Jimmy Miklavcic & Robert McDermott,
DVD-ROM Proceedings Co-Chairs

University of Utah
Center for High Performance Computing

Beth Miklavcic, *DVD Authorist*
Mary Anne Breen & Rachel Ring, *Graphic Design*
Russell Henrickson, *Adobe Acrobat Layout*

Spruce Technologies

Kirk Paulsen, *Vice President of Sales*
Brian Hoffman, *Marketing Manager*
Gary Hall, *Product Manager*

Awards

Computer Graphics Achievement Award

- **Andrew Witkin**

Steven A. Coons Award for Outstanding Creative Contributions to Computer Graphics

- **Lance J. Williams**

Significant New Researcher Award

- **Paul E. Debevec**