

Program

Wednesday – November 21, 2001

8⁰⁰ **Registration**

9⁰⁰ **Welcome Address**

9⁰⁵ **Invited Talk:** *A. Pinz:*

Consistent Visual Information Processing Applied to Object Recognition, Landmark Definition, and Real-Time Tracking

Session 1: Object Localization

(Chair: *H. Niemann*)

9⁵⁰ *B.-Z. Shaick, L. Yaroslavsky:*

Object Localization Using Linear Adaptive Filters

10¹⁰ *S. Spors, R. Rabenstein, N. Strobel:*

A Multi-Sensor Object Localization System

10³⁰ *M.E. Bock, C. Guerra:*

Segmentation of Range Images Through the Integration of Different Strategies

10⁵⁰ **Posters:**

Th. Chaperon, F. Goulette:

Extracting Cylinders in Full 3-D Data Using a Random Sampling Method and the Gaussian Image

A. Hutterer, T. Menzel, A. Otto, G. Müller:

Feature Extraction for Advanced Control of Flexible Forming Processes

H. Surmann, K. Lingemann, A. Nüchter, J. Hertzberg:

Fast Acquiring and Analysis of 3-D Laser Range Data

10⁵⁵ — **Coffee Break** —

Session 2: Subdivision and Multiresolution

(Chair: *D. Saupe*)

11²⁰ *U. Diewald, S. Morigi, M. Rumpf:*

On Geometric Evolution and Cascadic Multigrid in Subdivision

11⁴⁰ *S. Seeger, K. Hormann, G. Häusler, G. Greiner:*

A Sub-Atomic Subdivision Approach

12⁰⁰ *D. Rose, M. Kada, Th. Ertl:*

On-the-Fly Adaptive Subdivision Terrain

12²⁰ *A. Sarti, S. Tubaro:*

Multiresolution Implicit Object Modeling

Wednesday (contd.)

12⁴⁰ — **Lunch** —

14⁰⁰ **Invited Talk:** *D.S. Ebert:*

Perceptualization: Techniques for Effective Image Generation, Visualization, and Communication of Information

Session 3: Volume Visualization

(Chair: *Th. Ertl*)

14⁴⁵ *M. Hadwiger, Th. Theußl, H. Hauser, E. Gröller:*

Hardware-Accelerated High-Quality Filtering on PC Hardware

15⁰⁵ *J. Hladůvka, E. Gröller:*

Direction-Driven Shape-Based Interpolation of Volume Data

15²⁵ *G.H. Weber, O. Kreylos, T.J. Ligocki, J.M. Shalf, H. Hagen, B. Hamann, K.I. Joy, K.-L. Ma:*

High-Quality Volume Rendering of Adaptive Mesh Refinement Data

15⁴⁵ **Posters:**

E. Gladilin, S. Zachow, P. Deuffhard, H.-C. Hege:

Towards a Realistic Simulation of Individual Facial Mimics

M.W. Jones:

Facial Reconstruction Using Volumetric Data

J. Rodriguez, D. Ayala:

Erosion and Dilation on 2-D and 3-D Digital Images: A New Size-Independent Approach

F. Velasco, J.C. Torres:

Cells Octree: A New Data Structure for Volume Modeling and Visualization

15⁵⁵ — **Coffee Break** —

Session 4: Rendering Applications

(Chair: *Ph. Slusallek*)

16²⁰ *S. Roettger, Th. Ertl:*

Hardware-Accelerated Terrain Rendering by Adaptive Slicing

16⁴⁰ *Ph. Simard, M. Mitran, F.P. Ferrie:*

Motion Consistency for Image-Based Rendering

17⁰⁰ *P. Kipfer, G. Greiner:*

Parallel Rendering Within the Integrated Simulation and Visualization Framework gridlib

17²⁰ *B.J. Lei, E.A. Hendriks:*

Multi-Step View Synthesis with Occlusion Handling

17⁴⁰ **End of Day's Talks**

Thursday – November 22, 2001

9⁰⁰ **Invited Talk:** *R.T. Whitaker:*

Maximum Likelihood Surface Estimation

Session 5: Scene Modeling

(Chair: *G. Häusler*)

9⁴⁵ *S. Dedieu, P. Guitton, C. Schlick, P. Reuter:*

Reality: An Interactive Reconstruction Tool of 3-D Objects from Photographs

10⁰⁵ *F.E. Ernst, C.W.A.M. van Overveld, P. Wilinski:*

Efficient Generation of 3-D Models out of Depth Maps

10²⁵ *J. Schneider, R. Westermann:*

Towards Real-Time Visual Simulation of Water Surfaces

10⁴⁵ **Posters:**

M. Meißner, D. Bartz, G. Müller, T. Hüttner, J. Einighammer:

Generation of Decomposition Hierarchies for Efficient Occlusion Culling of Large Polygonal Models

D. Shikhare, S. Bhakar, S.P. Mudur:

Compression of Large 3-D Engineering Models Using Automatic Discovery of Repeating Geometric Features

10⁵⁰ — **Coffee Break** —

Session 6: Image Synthesis

(Chair: *E. Gröller*)

11²⁰ *H. Schirmacher, Ch. Vogelgsang, H.-P. Seidel, G. Greiner:*

Efficient Free Form Light Field Rendering

11⁴⁰ *Ph. Bekaert, H.-P. Seidel:*

A Theoretical Comparison of Monte Carlo Radiosity Algorithms

12⁰⁰ *S. Hiller, O. Deussen, A. Keller:*

Tiled Blue Noise Samples

12²⁰ *P.-P. Vázquez, M. Feixas, M. Sbert, W. Heidrich:*

Viewpoint Selection Using Viewpoint Entropy

12⁴⁰ — **Lunch** —

Thursday (contd.)

14⁰⁰ **Invited Talk:** *Leif Kobbelt:*
Feature sensitive mesh processing

Session 7: Geometric Modeling
(Chair: *H.-P. Seidel*)

14⁴⁵ *M. Botsch, L.P. Kobbelt:*
A Robust Procedure to Eliminate Degenerate Faces from
Triangle Meshes

15⁰⁵ *S.W. Choi, H.-P. Seidel:*
One-Sided Stability of MAT and Its Applications

15²⁵ *S. Deguy, A. Benassi:*
A Flexible Noise Model for Designing Maps

15⁴⁵ **Posters:**

S. Adolph, S. Gürke:
Modeling of a Fitting Inlay from Various Information

I. Boada, I. Navazo:
Multiresolution Isosurface Fitting on a Surface Octree

T. Kanai:
MeshToSS: Converting Subdivision Surfaces from Dense
Meshes

D. Saupe, J.-P. Kuska:
Compression of Isosurfaces for Structured Volumes

15⁵⁵ — — **Coffee Break** — —

Session 8: Shape Extraction
(Chair: *R. Grosso*)

16²⁰ *J. Bruijns:*
Fully-Automatic Branch Labelling of Voxel Vessel

16⁴⁰ *D. Saupe, J. Toelke:*
Optimal Memory Constrained Isosurface Extraction

17⁰⁰ *J. Ayasse, H. Müller:*
Interactive Manipulation of Voxel Volumes with Free-
Formed Voxel Tools

17²⁰ **End of Day's Talks**

19⁰⁰ **Social Event: "Wilhelma"**
Zoological and Botanical Gardens Stuttgart
Conference Dinner

Friday – November 23, 2001

9⁰⁰ **Invited Talk:** *R. Koch, J.-M. Frahm:*
Visual-Geometric Scene Reconstruction from Image
Streams

Session 9: Motion and Multiview Processing
(Chair: *E.G. Steinbach*)

9⁴⁵ *O. Schreer, N. Brandenburg, S. Askar, P. Kauff:*
Segmentation-Based Postprocessing in Real-Time Immer-
sive Video Conferencing

10⁰⁵ *I. Horovitz, N. Kiryati:*
Bias Correction in Photometric Stereo Using Control Points

10²⁵ *J. Schmidt, H. Niemann:*
Using Quaternions for Parametrizing 3-D Rotations in
Unconstrained Nonlinear Optimization

10⁴⁵ **Posters:**

R. Bernardini, G.M. Cortelazzo:
Accessing Multi-User Virtual Worlds over IP

Ch. Kermad, Ch. Collewet:
Improving Feature Tracking by Robust Points of Interest
Selection

P. Moallem, K. Faez:
Search Space Reduction in the Edge Based Stereo Corre-
spondence

S. Salamanca, A. Adán, C. Cerrada:
Controlled Fusion of Multiple Partial Models to Recon-
struct a Regularized 3-D Complete Model

10⁵⁵ — — **Coffee Break** — —

Session 10: Object Recognition
(Chair: *W. Straßer*)

11²⁰ *E.G. Steinbach, P. Eisert, B. Girod:*
Model-Based 3-D Shape and Motion Estimation Using
Sliding Textures

11⁴⁰ *B. Caputo, S. Bouattour, D. Paulus:*
A Novel Probabilistic Model for 3-D Object Recognition:
Spin-Glass Markov Random Fields

12⁰⁰ *M. Reinhold, D. Paulus, H. Niemann:*
Improved Appearance-Based 3-D Object Recognition
Using Wavelet Features

12²⁰ *R. Tam, A. Fournier:*
Shape Model and Threshold Extraction via Shape Gradients

Friday (contd.)

12⁴⁰ — — **Lunch** — —

Session 11: Flow Visualization and Simulation
(Chair: *R. Westermann*)

14⁰⁰ *D. Weiskopf, M. Hopf, Th. Ertl:*
Hardware-Accelerated Visualization of Time-Varying
2-D and 3-D Vector Fields by Texture Advection via
Programmable Per-Pixel Operations

14²⁰ *Th. Wischgoll, G. Scheuermann, H. Hagen:*
Tracking Closed Streamlines in Time-Dependent Planar
Flows

14⁴⁰ *F. Chatzinikos, H. Wright:*
Computational Steering by Direct Image Manipulation

15⁰⁰ — — **Coffee Break** — —

Session 12: Medical Applications
(Chair: *D. Weiskopf*)

15²⁵ *Th. Behrens, K. Rohr, H.S. Stiehl:*
Using an Extended Hough Transform Combined with
a Kalman Filter to Segment Tubular Structures in 3-D
Medical Images

15⁴⁵ *M. Scheuering, Ch. Rezk-Salama, Ch. Eckstein, K. Hormann,
G. Greiner:*
Interactive Repositioning of Bone Fracture Segments

16⁰⁵ **Closing Remarks**

16¹⁰ **End of Conference**