

Tuesday October 7, 2003

Location: Laszlo Funtek "LF"
Rooms 122 - 124

08:45-08:55 | Opening Remarks

08:55-09:35 | Invited Paper

Automatic Modeling of Animatable
Virtual Humans
Nadia Magnenat-Thalmann, *University of Geneva*

09:35-10:25 | Oral Session: Geometry 1

Chair: Marc Pollefeys

Deformable Model with Adaptive Mesh and
Automated
Topology Changes ~ *J.-O. Lachaud, B. Taton*

Image-Based Object Editing ~ *H. Rushmeier,
J. Gomes, L. Balmelli, F. Bernardini, G. Taubin*

10:25-10:55 | Break

10:55-11:45 | Oral Session: 3D Sensing 1

Chair: Denis Laurendeau

Optimized Position Sensors for Flying-Spot Active
Triangulation Systems ~ *J.-A. Beraldin, F. Blais,
M. Rioux, J. Domey, L. Gonzo, F. De Nisi, F. Comper,
D. Stoppa, M. Gottardi, A. Simoni*

Accuracy of 3D Range Scanners by Measurement of
the Slanted Edge Modulation Transfer Function
~ *M. Goesele, C. Fuchs, H.-P. Seidel*

13:20-15:00 | Oral Session: Model Construction 1

Chair: Henrik Haggren

Silhouette and Stereo Fusion for 3D Object Modeling
~ *C. Hernández Esteban, F. Schmitt*

Efficient Surface Reconstruction from Range Curves
~ *D. Tubic, P. Hébert, D. Laurendeau*

Next View Planning for a Combination of Passive and
Active Acquisition Techniques ~ *R. Sablatnig,
S. Tosovic, M. Kampel*

Cramer-Rao Bounds for Nonparametric Surface
Reconstruction from Range Data ~ *T. Tasdizen,
R. Whitaker*

15:00-15:30 | Break

15:30-18:00 | Poster Session (Reception at 16:30)

Location: Donald Cameron Hall, Private Function
Rooms 3, 4 & 5

Effective Nearest Neighbor Search for Aligning
and Merging Range Images ~ *R. Sagawa,
T. Masuda, K. Ikeuchi*

Active Balloon Model Based on 3D Skeleton
Extraction By Competitive Learning
~ *K. Morooka, H. Takagi, H. Nagahashi*

Using k-D Trees for Robust 3D Point
Pattern Matching ~ *B. Li, H. Holstein*

3D Animation Of Cerebral Activity Using
Both Spatial and Temporal fMRI
Information ~ *C. Aguerre, P. Desbarats,
B. Dilharreguy, C.T.W. Moonen*

3D Optical Scanning Diagnostics for Leonardo Da Vinci's "Adorazione dei
Magi" Conservation ~ *G. Guidi, C. Atzeni, S. Lazzari*

Human Figure Reconstruction and Modeling from Single Image or
Monocular Video Sequence ~ *F. Remondino, A. Roditakis*

Segmentation and Modeling of Approximately Rotationally Symmetric
Objects in 3D Ultrasound ~ *J. Ruisz, D. Hönigmann, H. Pottmann*

Automatic 3D Modeling of Palatal Plaster Casts ~ *M. Andreetto,
N. Brusco, G.M. Cortelazzo*

Colour Texture Fusion of Multiple Range Images ~ *A. Agathos, R.B. Fisher*

A Range Image Refinement Technique for Multi-view 3D Model
Reconstruction ~ *S.-Y. Park, M. Subbarao*

3-D Motion and Shape from Multiple Image Sequences ~ *R. Mecke,
B. Michaelis*

Free-Form Surface Reconstruction from Multiple Images ~ *C. Shu, G. Roth*

Reliable and Rapidly-Converging ICP Algorithm Using Multiresolution
Smoothing ~ *K.-L. Low, A. Lastra*

Combining Texture and Shape for Automatic Coarse Patch Registration
~ *J. Vanden Wyngaerd, L. Van Gool*

Evaluating Structural Constraints for Accurate Range Image
Registration ~ *Y. Liu, B. Wei*

Parallel Alignment of a Large Number of Range Images ~ *T. Oishi,
R. Sagawa, A. Nakazawa, R. Kurazume, K. Ikeuchi*

Adaptive Enhancement of 3D Scenes Using Hierarchical Registration of
Texture-Mapped 3D Models ~ *S. Ramalingam, S.K. Lodha*

3D Head Pose Estimation with Optical Flow and Depth Constraints
~ *Y. Zhu, K. Fujimura*

Multi-Projectors for Arbitrary Surfaces without Explicit Calibration nor
Reconstruction ~ *J.-P. Tardif, S. Roy, M. Trudeau*

Calibration of a Zooming Camera using the Normalized Image of the
Absolute Conic ~ *J.-Y. Guillemaut, A.S. Aguado, J. Illingworth*

Wednesday October 8, 2003

Location: Laszlo Funtek "LF" Rooms 122 - 124

08:30-09:10 | Invited Paper

Image-Based Techniques for Digitizing Environments and
Artifacts
Paul Debevec, *USC Creative Technology Institute*

09:10-10:00 | Oral Session: Model Construction 2

Chair: Holly Rushmeier

Exploiting Mirrors for Laser Stripe 3D Scanning ~ *A. Fasano,
M. Callieri, P. Cignoni, R. Scopigno*

Recursive Model Optimization Using ICP and Free Moving 3D Data
Acquisition ~ *F. Blais, M. Picard, G. Godin*

10:00-10:30 | Break

10:30-11:45 | Oral Session: View Registration 1

Chair: Takeshi Masuda

Geometrically Stable Sampling for the ICP Algorithm ~ *N. Gelfand,
L. Ikemoto, S. Rusinkiewicz, M. Levoy*

Enhanced, Robust Genetic Algorithms for Multiview Range Image
Registration ~ *L. Silva, O.R.P. Bellon, K.L. Boyer*

A Fast Point-to-Tangent Plane Technique for Multi-View Registration
~ *S.-Y. Park, M. Subbarao*

13:20-14:10 | Oral session: 3D Sensing 2

Chair: François Blais

The ModelCamera: A Hand-Held Device for Interactive Modeling
~ *V. Popescu, E. Sacks, G. Bahmutov*

Real-Time Range Scanning of Deformable Surfaces by Adaptively Coded
Structured Light ~ *T.P. Koninckx, A. Griesser, L. Van Gool*

14:10-15:20 | Special Session: Heritage Applications of 3-D Imaging and Modeling

Chair: J.-Angelo Beraldin

Effective 3D Modeling Of Heritage Sites ~ *S.F. El-Hakim, J.-A. Beraldin,
M. Picard, A. Vettore*

Scanning and Processing 3D Objects for Web Display ~ *M. Farouk,
I. El-Rifai, S. El-Tayar, H. El-Shishiny, M. Hosny, M. El-Rayes,
J. Gomes, F. Giordano, H. Rushmeier, F. Bernardini, K. Magerlein*

15:20-15:50 | Break

15:50-17:20 | Special Session (continued)

Virtual Reconstruction of Broken and Unbroken Pottery ~ *M. Kampel,
R. Sablatnig*

Digital Preservation of Ancient Cuneiform Tablets Using 3D-Scanning
~ *S. Kumar, D. Snyder, D. Duncan, J. Cohen, J. Cooper*

Accuracy Verification and Enhancement in 3D Modeling: Application to
Donatello's Maddalena ~ *G. Guidi, A. Cioci, C. Atzeni, J.-A. Beraldin*

17:20-17:45 | Break

17:45-18:30 | Video Theatre

20:00 | Cocktails (cash bar)

20:30 | Banquet Dinner

Location: Main Dining Room, Donald Cameron Hall

Thursday October 9, 2003

Location: Laszlo Funtek "LF" Rooms 122 - 124

08:30-09:10 | Invited Paper

Solving Architectural Modelling Problems Using Knowledge
Robert B. Fisher, *University of Edinburgh*

09:10-10:00 | Oral Session: Geometric Signal Processing

Chair: Luc Van Gool

Anisotropic Diffusion of Surface Normals for Feature Preserving Surface
Reconstruction ~ *T. Tasdizen, R. Whitaker*

Surface Curvature Estimation from the Signed Distance Field ~ *T. Masuda*

10:00-10:30 | Break

10:30-11:45 | Oral Session: Human Modeling and Identification

Chair: Nadia Magnenat-Thalmann

Three-Dimensional Reconstruction of the Bony Structures Involved in
the Articular Complex ~ *A. Branzan Albu, D. Laurendeau, L.J. Hébert,
H. Moffet, C. Moisan*

A Discrete Reeb Graph Approach for the Segmentation of Human Body
Scans ~ *Y. Xiao, P. Siebert, N. Wergchi*

Human Identification from Body Shape
~ *A. Godil, P. Grother, S. Ressler*

13:20-15:00 | Oral Session: Model Construction 3

Chair: Marc Levoy

Automatic Model Refinement for 3D
Reconstruction with Mobile Robots
~ *A. Nüchter, H. Surmann, J. Hertzberg*

Efficient Reconstruction of Indoor Scenes
with Color ~ *R. Wang, D. Luebke*

Taking Consensus of Signed Distance Field for
Complementing Unobservable Surface
~ *R. Sagawa, K. Ikeuchi*

Registration and Fusion of Intensity and Range Data
for 3D Modelling of Real World Scenes
~ *P. Dias, V. Sequeira, F. Vaz, J.G.M. Gonçalves*

15:00-15:30 | Break

15:30-17:10 | Oral Session: View Registration 2

Chair: Patrick Hébert

A Multi-Resolution ICP with Heuristic Closest Point
Search for Fast and Robust 3D Registration of Range
Images ~ *T. Jost, H. Hügli*

A Hierarchical Method for Aligning Warped Meshes
~ *L. Ikemoto, N. Gelfand, M. Levoy*

Approximate K-D Tree Search for Efficient ICP
~ *M. Greenspan, M. Yurick*

Stable Real-Time Interaction Between Virtual Humans
and Real Scenes ~ *L. Vacchetti, V. Lepetit,
G. Papagiannakis, M. Ponder, P. Fua,
D. Thalmann, N. Magnenat-Thalmann*

Friday October 10, 2003

Location: Laszlo Funtek "LF" Rooms 122 - 124

08:30-9:45 | Oral Session: Geometry 2

Chair: Robert Fisher

Weighted Cone-Curvature: Applications for 3D
Shapes Similarity ~ *M. Adán, A. Adán, C. Cerrada,
P. Merchán, S. Salamanca*

Streaming Transmission of Point-Sampled
Geometry Based on View-Dependent Level-of-Detail
~ *F. Meng, H. Zha*

Surflet-Pair-Relation Histograms: A Statistical
3D-Shape Representation for Rapid Classification
~ *E. Wahl, U. Hillenbrand, G. Hirtzinger*

9:45-10:15 | Break

10:15-11:05 | Oral Session: 3D Sensing 3

Chair: Sabry El-Hakim

A Point-and-Shoot Color 3D Camera
~ *A.V. Strat, M.M. Oliveira*

Interactive Shape Acquisition Using
Marker Attached Laser Projector
~ *R. Furukawa, H. Kawasaki*

11:05-11:15 | Closing Remarks

Monday October 6, 2003

**Morning Tutorials
08:30-12:00**

Location: Donald Cameron Hall,
Rooms 300, 305 & 307

3D Active Sensing Techniques

François Blais, National Research Council
Guy Godin, National Research Council

3D Modeling from Images

Marc Pollefeys, University of North Carolina at Chapel Hill

Modeling of Architectural and Archaeological Sites

Richard M. Levy, University of Calgary

Afternoon Tutorials

13:30-17:00

Location: Donald Cameron Hall, Rooms 300, 305 & 307

Museum and Heritage Applications of 3D Imaging and Modeling

J.-Angelo Beraldin, National Research Council
Holly Rushmeier, IBM Research
John Taylor, National Research Council

Fundamentals of Photogrammetry

Henrik Haggrén, Helsinki University of Technology

A Coherent Framework for Processing Range Data

Pierre Boulanger, University of Alberta

Wednesday October 8, 2003

Video Theatre

17:45-18:30

Location: Laszlo Funtek "LF" Rooms 122 - 124

Making the Virtual Real

University of Calgary, Canada

Computer Reconstruction: Temple Site at Phimai

University of Calgary, Canada

A Fast Hybrid Geomorphing LOD Scheme

National Research Council, Canada

Portals

National Research Council, Canada

The Model Camera: A Hand-Held Device for Interactive Modeling

Purdue University, USA

Autonomous Mobile Robots for 3D Digitization of Environments

Fraunhofer Institute, Germany

Instant Scene Modeler (ISM)

MD Robotics, Canada

The Parthenon

University of Southern California, USA

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The Conference at a Glance

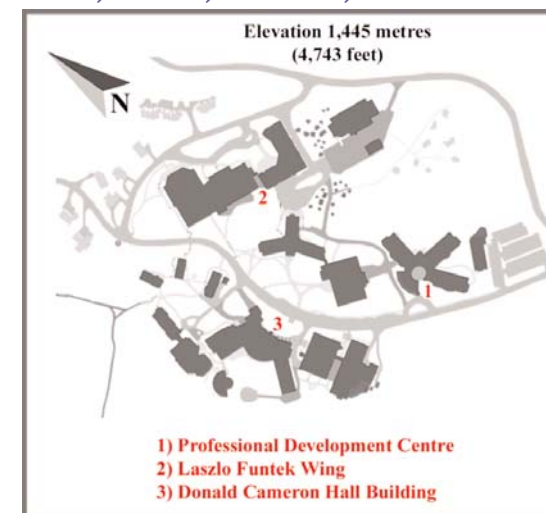
Main conference location is the Laszlo Funtek "LF" Rooms 122 - 124.

Monday October 6, 2003	Tuesday October 7, 2003	Wednesday October 8, 2003	Thursday October 9, 2003	Friday October 10, 2003
8:30-12:00 Morning Tutorials Location: Donald Cameron Hall, Rooms 300, 305 & 307 Coffee Breaks: Room 303	08:45-08:55 Opening Remarks 08:55-09:35 Invited Speaker: N. Magnenat-Thalmann 09:35-10:25 Geometry 1 10:55-11:45 3D Sensing 1	08:30-09:10 Invited Speaker: Paul Debevec 09:10-10:00 Model Construction 2 10:30-11:45 View Registration 1	08:30-09:10 Invited Speaker: Robert Fisher 09:10-10:00 Geometric Signal Processing 10:30-11:45 Human Modeling and Identification	08:30-9:45 Geometry 2 10:15-11:05 3D Sensing 3 11:05-11:15 Closing Remarks
13:30-17:00 Afternoon Tutorials Location: Donald Cameron Hall, Rooms 300, 305 & 307 Coffee Breaks: Room 303	13:20-15:00 Model Construction 1 15:30-18:00 Poster Session (Reception at 16:30) Location: Donald Cameron Hall, Private Function Rooms 3, 4, & 5	13:20-14:10 3D Sensing 2 14:10-17:20 Special Session: Heritage Applications 17:45-18:30 Video Theatre Presentation	13:20-15:00 Model Construction 3 15:30-17:10 View Registration 2	13:30-15:30 <i>Nature Walk: Tunnel Mountain</i>
17:30-18:30 <i>Nature Walk: The Hoodoos</i>		20:00 Cocktails Location: Main Dining Room, Donald Cameron Hall 20:30 Banquet Dinner		

The Banff Centre, Banff, Alberta, Canada

Conference Location | Laszlo Funtek "LF" Rooms 122 - 124 (except Tutorials and Poster Session)

Registration Location | Professional Development Centre (PDC) Building (Accommodations, Tutorials and Conference)



Registration to conference and tutorials:

- Sunday, October 5, 2003 | 19:00-21:00
- Monday, October 6, 2003 | 7:30-9:30 and 15:00-19:00
- Tuesday, October 7, 2003 | 8:00-10:00
- Wednesday, October 8, 2003 | 8:00-10:00
- Thursday, October 9, 2003 | 8:00-10:00



Fourth International Conference on 3-D Digital Imaging and Modeling

**October 6-10, 2003
The Banff Centre
Banff, Alberta, Canada**

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