DAVID EDWARD BREEN

Work Address: Computer Graphics Laboratory 348 Beckman Institute, MS 348-74 California Institute of Technology Pasadena, CA 91125 (626) 395-2866 david@gg.caltech.edu Home Address: 413 E. La Sierra Drive Arcadia, CA 91006 (626) 447-9793

http://www.gg.caltech.edu/~david

EDUCATION

Ph.D.: Computer and Systems Engineering

August 1993

Rensselaer Polytechnic Institute, Troy, NY

Dissertation: A Particle-Based Model for Simulating the Draping Behavior of Woven Cloth

M.S.: Computer and Systems Engineering Rensselaer Polytechnic Institute, Troy, NY August 1985

Thesis: Creation and Smooth-Shading of Steiner Patch Tessellations

B.A.: Physics May 1982

Colgate University, Hamilton, NY

EMPLOYMENT HISTORY

Assistant Director, Computer Graphics Laboratory

California Institute of Technology, Pasadena, CA

5/96-Present

- Responsible for administrative and fund-raising activities, and supervision of research grants.
- Principle investigator (PI) for two NSF-funded research projects "Multiresolution Visualization Tools for Interactive Analysis of Large-Scale N-Dimensional Datasets" and "Interactive Level Set Modeling for Visualization of Biological Volume Datasets".
- Co-PI for NSF-funded equipment grant "Development of the Distributed Teravoxel Data System: Acquisition, Networking, Archiving, Analysis and Visualization".
- Caltech Site Coordinator NSF Science and Technology Center for Graphics and Visualization.
- Conducting research in deformable models for graphics and segmentation, visualization, geometric modeling, and parallel graphics systems.
- Supervising undergraduate research projects.

Member of Research Staff, User Interaction & Visualization Group

European Computer-Industry Research Centre, Munich, Germany

1/94-4/96

- Member of a research group that developed augmented reality technologies and applications.
- Personally involved with development of calibration and modeling technologies, and a vision-based camera tracking application.
- Co-PI for two European Union-funded research projects "Collaborative Integrated Communications for Construction", and "Training and Mobility of Researchers - Computer Animation Research Network".
- Responsible for overseeing the "Mechanical Repair" augmented reality application.

Research Engineer, Visual Technologies Program, Rensselaer Design Research Center Rensselaer Polytechnic Institute, Troy, NY 6/85-12/93

- Co-led the Visual Technologies Program.
- Organized and supervised undergraduate, M.S. and Ph.D. research projects.

- Personally conducted research in physically-based modeling, object-oriented computer animation and geometric modeling.
- Responsible for communications and interactions with industrial sponsors.

Visiting Research Engineer, Computer Animation Group

Fraunhofer Institute for Computer Graphics, Darmstadt, Germany

8/87-7/88

• Supervised students and personally conducted research in the area of object-oriented computer animation and computer graphics.

Graduate Research Assistant, Center for Interactive Computer Graphics

Rensselaer Polytechnic Institute, Troy, NY

6/82-5/85

• Conducted research in computer animation and geometric modeling.

Summer Intern, Thomas J. Watson Research Center

IBM, Yorktown Heights, NY

Summer 1984

• Developed communication software for an IBM PC-5080 interface.

AWARDS

The Literati Club Award for Best Paper of 1996 in the International Journal of Clothing Science and Technology (with D. House and R. DeVaul).

"Cloth Drape - Real & Virtual" (with D. House and K. Reuter), Best R & D Slide, Eurographics '94, Oslo, September 1994.

Awarded Garden State Graduate Fellowship, 1982.

RESEARCH SUPPORT

Development of the Distributed Teravoxel Data System: Acquisition, Networking, Archiving, Analysis and Visualization, National Science Foundation, \$237,000, 2000-2003, P. Dimotakis, principal investigator.

Interactive Level-Set Modeling for Visualization of Biological Volume Datasets, National Science Foundation, \$265,000, 2000-2003, D. Breen, principal investigator.

Multiresolution Visualization Tools for Interactive Analysis of Large-Scale N-Dimensional Datasets, National Science Foundation, \$1.2M, 1999-2002, D. Breen, principal investigator.

Training and Mobility of Researchers - Computer Animation Research Network (ECRC Component), European Union, \$324,000, 1996-2000, P. Willis, principal investigator.

Collaborative Integrated Communications for Construction (Augmented Reality Component), European Union and ECRC Shareholders, \$1.57M, 1995-1998, D. Leevers, principal investigator.

Automated Handling of Garments (Modeling Component), Defense Logistics Agency, \$125,000, 1990, D. House, principal investigator.

PROFESSIONAL SOCIETIES

ACM SIGGRAPH, IEEE Computer Society, Eurographics

PROFESSIONAL ACTIVITIES - PUBLICATIONS

Guest editor for the September 1996 *IEEE Computer Graphics and Applications* special issue on Computer Graphics in Textiles and Apparel Modeling.

PROFESSIONAL ACTIVITIES - CONFERENCES

- Co-organizer SIGGRAPH 2002 tutorial "Level Set and PDE Methods for Computer Graphics", San Antonio, TX, July 2002.
- Program Committee Member IEEE Visualization 2002 Conference.
- Program Committee Member ACM Symposium on Computer Animation, 2002.
- Program Committee Member 2002 Immersive Projection Technology Symposium.
- Program Committee Member Eurographics Workshop on Parallel Graphics and Visualization, 2002.
- Program Committee Member IASTED Computer Graphics and Imaging Conference, 2000-2002.
- Co-chair IEEE 2001 Symposium on Parallel and Large-Data Visualization and Graphics.
- Conference Committee Member IEEE Visualization 2001 Conference.
- Program Committee Member Eurographics Workshop on Virtual Environments, 1998-2001.
- Program Committee Member 1998 International Symposium on Computer Graphics, Image Processing and Vision.
- Organizer and Chair SIGGRAPH '97 panel "Can We Get There From Here? : Current Challenges in Cloth Design, Modeling and Animation", Los Angeles, CA, August 1997.

PROFESSIONAL ACTIVITIES - PROPOSAL REVIEW PANELS

Member of NSF Visualization 2001 proposal review panel.

DEPARTMENTAL ACTIVITIES

Member of Caltech Computer Science Department graduate admissions committee, 1997-1998.

BOOKS

D. Breen, A. Heirich and A. Koning (eds.), **2001 Symposium on Parallel and Large-Data Visualization Proceedings**, ACM SIGGRAPH, 2001.

D.H. House and D.E. Breen (eds.), *Cloth Modeling and Animation*, AK Peters, Natick, MA, 2000.

BOOK CHAPTERS

R.T. Whitaker, D.E. Breen, K. Museth and N. Soni, "Segmentation of Biological Volume Datasets Using a Level-Set Framework," K. Mueller, A. Kaufman (eds.), *Volume Graphics 2001*, Springer, Vienna, pp. 249-263, 2001.

D.E. Breen, S. Mauch and R.T Whitaker, "3D Scan Conversion of CSG Models into Distance, Closest-Point and Colour Volumes," M. Chen, A.E. Kaufman, R. Yagel (eds.) *Volume Graphics*, Springer, London, Chapter 8, pp. 135-158, 2000.

D.E. Breen, "A Survey of Cloth Modeling Methods," D.H. House and D.E. Breen (eds.), *Cloth Modeling and Animation*, AK Peters, Natick, MA, Chapter 2, pp. 19-53, 2000.

JOURNAL PUBLICATIONS

- M. Aono, D.E. Breen and M.J. Wozny, "Modeling Methods for the Design of 3D Broadcloth Composite Parts," *Computer-Aided Design*, Vol. 33, No. 13, pp. 989-1007, November 2001.
- D.E. Breen and R.T. Whitaker, "A Level-Set Approach for the Metamorphosis of Solid Models," *IEEE Transactions on Visualization and Computer Graphics*, Vol. 7, No. 2, pp. 173-192, April-June 2001.
- D.E. Breen, "Cost Minimization for Animated Geometric Models in Computer Graphics," *Journal of Visualization and Computer Animation*, Vol. 8, pp. 201-220, 1997.
- G.J. Klinker, K.H. Ahlers, D.E. Breen, P.-Y. Chevalier, C. Crampton, D.S. Greer, D. Koller, A. Kramer, E. Rose, M. Tuceryan and R.T. Whitaker, "Confluence of Computer Vision and Interactive Graphics for Augmented Reality," *Presence: Teleoperations and Virtual Environments*, Vol. 6, No. 4, pp. 433-451, August 1997.
- D.E. Breen, "Computer Graphics in Textiles and Apparel Modeling," guest editor introduction, *IEEE Computer Graphics and Applications*, Vol. 16, No. 5, pp. 26-27, September 1996.
- M. Aono, P. Denti, D.E. Breen and M.J. Wozny, "Fitting a Woven Cloth Model to a Curved Surface: Dart Insertion," *IEEE Computer Graphics and Applications*, Vol. 16, No. 5, pp. 60-70, September 1996.
- D.H. House, R.W. DeVaul and D.E. Breen, "Towards Simulating Cloth Dynamics Using Interacting Particles," *International Journal of Clothing Science and Technology*, Vol. 8, No. 3, pp. 75-94, 1996. (Awarded Best Paper of the Year)
- M. Tuceryan, D.S. Greer, R.T. Whitaker, D.E. Breen, C. Crampton, E. Rose and K.H. Ahlers, "Calibration Requirements and Procedures for a Monitor-Based Augmented Reality System," *IEEE Transactions on Visualization and Computer Graphics*, Vol. 1, No. 3, pp. 255-273, September 1995.
- D.E. Breen, D.H. House and M.J. Wozny, "A Particle-Based Model for Simulating the Draping Behavior of Woven Cloth," *Textile Research Journal*, Vol. 64, No. 11, pp. 663-685, November 1994.
- M. Aono, D.E. Breen and M.J. Wozny, "Fitting a Woven Cloth Model to a Curved Surface: Mapping Algorithms," *Computer-Aided Design*, Vol. 26, No. 4, pp. 278-292, April 1994.
- D.E. Breen, D.H. House and P.H. Getto, "A Physically-Based Particle Model of Woven Cloth," *The Visual Computer*, Vol. 8, No. 5-6, pp. 264-277, June 1992.
- P.H. Getto and D.E. Breen, "An Object-Oriented Architecture for a Computer Animation System," *The Visual Computer*, Vol. 6, No. 2 (Springer-Verlag, Heidelberg, March 1990) pp. 79-92.

REFEREED CONFERENCE PUBLICATIONS

- K. Museth, D.E. Breen, R.T. Whitaker and A.H. Barr, "Level Set Surface Editing Operators," to be published in *SIGGRAPH 2002 Conference Proceedings* (San Antonio, TX, July 2002).
- M. Gavriliu, J. Carranza, D. Breen and A. Barr, "Extracting Multiresolution Meshes from Volumes with Guaranteed Properties," *IEEE Visualization 2001 Proceedings* (San Diego, CA, October 2001) pp. 295-302.

- S. Lombeyda, L. Moll, M. Shand, D. Breen and A. Heirich, "Scalable Interactive Ray-casting of Volumes Using Off-the-shelf Components," *2001 Symposium on Parallel and Large-Data Visualization and Graphics Proceedings* (San Diego, CA, October 2001) pp. 115-121.
- D.E. Breen, S. Mauch, R.T. Whitaker and J. Mao, "3D Metamorphosis Between Different Types of Geometric Models," *Eurographics 2001 Proceedings* (Manchester, UK, September 2001) pp. 36-48.
- R.T. Whitaker, D.E. Breen, K. Museth and N. Soni, "A Framework for Level Set Segmentation of Volume Datasets," *International Workshop on Volume Graphics Proceedings* (Stony Brook, NY, June 2001) pp. 159-168.
- Z. Wood, M. Desbrun, P. Schröder and D. Breen, "Semi-Regular Mesh Extraction From Volumes," *IEEE Visualization 2000 Proceedings* (Salt Lake City, UT, October 2000) pp. 275-282.
- D.E. Breen and S. Mauch, "Generating Shaded Offset Surfaces with Distance, Closest-Point and Color Volumes," *International Workshop on Volume Graphics Proceedings* (Swansea, UK, March 1999) pp. 307-320.
- D.E. Breen, S. Mauch and R.T. Whitaker, "3D Scan Conversion of CSG Models into Distance Volumes," *1998 Symposium on Volume Visualization Proceedings* (RTP, NC, October 1998) pp. 7-14.
- R.T. Whitaker and D.E. Breen, "Level-Set Models for the Deformation of Solid Objects," *3rd International Workshop on Implicit Surfaces Proceedings* (Seattle, WA, June 1998) pp. 19-35.
- D. Koller, G. Klinker, E. Rose, D.E. Breen, R.T. Whitaker and M. Tuceryan, "Real-Time Vision-Based Camera Tracking for Augmented Reality Applications," *ACM Symposium on Virtual Reality Software and Technology (VRST '97) Proceedings* (Lausanne, Switzerland, September 1997) pp. 87-94.
- D. Koller, G. Klinker, E. Rose, D.E. Breen, R.T. Whitaker and M. Tuceryan, "Automated Camera Calibration and 3D Egomotion Estimation for Augmented Reality Applications," *7th International Conference on Computer Analysis of Images and Patterns (CAIP '97) Proceedings* (Kiel, Germany, September 1997) pp. 109-206.
- D.E. Breen, R.T. Whitaker, E. Rose and M. Tuceryan, "Interactive Occlusion and Automatic Object Placement for Augmented Reality," *Eurographics '96 Proceedings* (Poitiers, France, August 1996) pp. 11-22.
- K.H. Ahlers, A. Kramer, D.E. Breen, P.-Y. Chevalier, C. Crampton, E. Rose, M. Tuceryan, R.T. Whitaker and D.S. Greer, "Distributed Augmented Reality for Collaborative Design Applications," *Eurographics '95 Proceedings* (Maastricht, NL, August 1995) pp. 3-14.
- R.T. Whitaker, C. Crampton, D.E. Breen, M. Tuceryan and E. Rose, "Object Calibration for Augmented Reality," *Eurographics '95 Proceedings* (Maastricht, NL, August 1995) pp. 15-27.
- E. Rose, D.E. Breen, K.H. Ahlers, C. Crampton, M. Tuceryan, R.T. Whitaker and D.S. Greer, "Annotating Real-World Objects Using Augmented Reality," *Computer Graphics: Developments in Virtual Environments (CG International '95 Conference Proceedings)*, eds. R.A. Earnshaw and J.A. Vince (Academic Press, London, June 1995) pp. 357-370.
- D.E. Breen, D.H. House and M.J. Wozny, "Predicting the Drape of Woven Cloth Using Interacting Particles," *SIGGRAPH '94 Conference Proceedings* (Orlando, FL, July 1994) pp. 365-372.

- M. Aono, D.E. Breen and M.J. Wozny, "A Computer-Aided Broadcloth Composite Layout Design System," *Geometric Modeling for Product Realization (IFIP Conference on Geometric Modeling Proceedings)*, eds. P.R. Wilson, M.J. Wozny and M.J. Pratt (North-Holland, Amsterdam, September 1992) pp. 223-250.
- D.H. House, D.E. Breen and P.H. Getto, "On the Dynamic Simulation of Physically-Based Particle-System Models," *Third Eurographics Workshop on Animation and Simulation Proceedings* (Cambridge, UK, September 1992).
- D.E. Breen, "Constructive Cubes: CSG Evaluation For Display Using 3-D Scalar Data Sets," *Eurographics '91 Proceedings* (Vienna, Austria, September 1991) pp. 127-142.
- J.V. Miller, D.E. Breen, W.E. Lorensen, R.M. O'Bara and M.J. Wozny, "Geometrically Deformed Models: A Method for Extracting Closed Geometric Models from Volume Data," *SIGGRAPH '91 Conference Proceedings* (Las Vegas, NV, July 1991) pp. 217-226.
- D.E. Breen, D.H. House and P.H. Getto, "A Particle-Based Computational Model of Cloth Draping Behavior," *Scientific Visualization of Physical Phenomena (CG International '91 Proceedings)*, ed. N.M. Patrikalakis (Springer-Verlag, Tokyo, June 1991) pp. 113-134.
- J.V. Miller, D.E. Breen and M.J. Wozny, "Extracting Geometric Models Through Constraint Minimization," *Visualization '90 Conference Proceedings* (San Francisco, October 1990) pp. 74-82.
- D.E. Breen, P.H. Getto and A.A. Apodaca, "Object-Oriented Programming in a Conventional Programming Environment," *13th Annual International Computer Software and Applications Conference Proceedings* (Orlando, FL, September, 1989) pp. 334-343.
- D.E. Breen and V. Kühn, "Message-Based Object-Oriented Interaction Modeling," *Eurographics '89 Proceedings* (Hamburg, FRG, September 1989) pp. 489-503.
- D.E. Breen, "Choreographing Goal-Oriented Motion Using Cost Functions," *State-of-the-art in Computer Animation (Computer Animation '89 Conference Proceedings)*, eds. N. Magnenat-Thalmann and D. Thalmann (Springer-Verlag, Tokyo, June 1989) pp. 141-151.
- D.E. Breen and M.J. Wozny, "Message-Based Choreography for Computer Animation," *State-of-the-art in Computer Animation (Computer Animation '89 Conference Proceedings)*, eds. N. Magnenat-Thalmann and D. Thalmann (Springer-Verlag, Tokyo, June 1989) pp. 69-82.
- D.E. Breen, P.H. Getto and A.A. Apodaca, "An Object-Oriented Programming Methodology for a Conventional Programming Environment," *Second IEE/BCS Software Engineering Conference Proceedings* (Liverpool, UK, July 1988) pp. 65-72.
- D.E. Breen, P.H. Getto, A.A. Apodaca, D.G. Schmidt and B.D. Sarachan, "The Clockworks: An Object-Oriented Computer Animation System," *Eurographics '87 Proceedings* (Amsterdam, August 1987) pp. 275-282.
- D.E. Breen, "Creation and Smooth-Shading of Steiner Patch Tessellations," *1986 Fall Joint Computer Conference Proceedings* (Dallas, TX, November 1986) pp. 931-940.

ABSTRACT-REFEREED CONFERENCE AND TUTORIAL PUBLICATIONS

- L. Zhukov, J. Bao, I. Guskov, J. Wood and D. Breen, "Dynamic Deformable Models for MRI Heart Segmentation," to be published in *SPIE Medical Imaging 2002 Proceedings*.
- L. Zhukov, K. Museth, D. Breen and R. Whitaker, "3D Modeling and Segmentation of Diffusion Weighted MRI Data," *SPIE Medical Imaging 2001 Proceedings* (San Diego, CA, February 2001) pp. 401-412.
- K.H. Ahlers, D.E. Breen, C. Crampton, E. Rose, M. Tuceryan, R.T. Whitaker and D.S. Greer, "An Augmented Vision System for Industrial Applications," *Telemanipulator and Telepresence Technologies*, SPIE Proceedings, Vol. 2351, pp. 345-359, October 1994.
- D.E. Breen, "Applying Particle Systems to the Modeling of Cloth Drape," *ACM SIGGRAPH '92 Course Notes #16 Particle System Modeling Animation, and Physically-Based Techniques* (Chicago, July 1992).
- D.H. House and D.E. Breen, "Particles: A Naturally Parallel Approach to Modeling," *3rd Symposium on the Frontiers of Massively Parallel Computation Proceedings* (College Park, MD, October 1990) pp. 150-153.
- D.H. House and D.E. Breen, "Particles As Modeling Primitives For Surgical Simulation," *11th Annual International IEEE Engineering in Medicine & Biology Conference Proceedings* (Seattle, WA, November 1989) pp. 831-832.
- D.E. Breen and P.H. Getto, "Object-Oriented Visualization Tools," *Electronic Imaging '89 East Conference Proceedings* (Boston, MA, October 1989) pp. 541-545.
- D.E. Breen, A.A. Apodaca and P.H. Getto, "The Clockworks: An Implementation of an Object-Oriented Computer Animation System in a Conventional Programming Environment," *ACM SIGGRAPH '87 Course Notes #14 Object-Oriented Geometric Modeling and Rendering* (Anaheim, CA, July 1987).

SELECTED PRESENTATIONS

- "Level Set Models for Computer Graphics"
- Dartmouth College, Hanover, NH, April 2002.
- Rutgers University, Piscataway, NJ, April 2002.
- University of Maryland, College Park, MD, March 2002.
- Lehigh University, Bethlehem, PA, February 2002.
- University of Maryland, Baltimore, MD, February 2002.
- Pennsylvania State University, State College, PA, January 2002.
- "Predicting the Draping Behavior of Woven Cloth Using Interacting Particles"
- University of Utah, Salt Lake City, UT, April 2002.
- Lehigh University, Bethlehem, PA, February 2002.
- NSF Science and Technology Center for Graphics and Visualization, October 1996.
- SIGGRAPH '94 Conference, Orlando, July 1994.
- Fiber Society Technical Conference, Ithaca, NY, October 1993.
- "The Evolution of Cloth Modeling and Animation"
- NSF Science and Technology Center for Graphics and Visualization, November 2000.
- 7th IFIP Workshop on Geometric Modeling (Keynote Talk), Parma, Italy, October 2000.

- "A Level Set Approach for the Metamorphosis of Solid Models"
- SIGGRAPH '99 Conference, Technical Sketches session, Los Angeles, August 1999.
- "Current Challenges in Particle-Based Cloth Modeling"
- SIGGRAPH '97 Conference, Panels session, Los Angeles, August 1997.
- "Interactive Occlusion and Automatic Object Placement for Augmented Reality"
- Eurographics '96 Conference, Poitiers, France, August 1996.
- SIGGRAPH '95 Conference, Technical Sketches session, Los Angeles, August 1995.
- "Augmented Reality: Bringing Computers into the Real World"
- Science and Technology Lecture Series, Bavaria-USA 50 Year Partnership Celebration, (Invited Talk), Munich, November 1995.
- "A Computational Particle-Based Model of Cloth Draping Behavior"
- Fourth IFIP Workshop on Geometric Modeling in Computer-Aided Design, Rensselaerville, NY, September 1992
- ACM SIGGRAPH '92 Course #16 Particle System Modeling, Animation, and Physically-Based Techniques, Chicago, July 1992.
- Fiber Society Technical Conference, New Orleans, December 1991.
- Williams College, Williamstown, MA, April 1991.
- "The Clockworks: An Object-Oriented Computer Animation System"
- Electronic Imaging '89 East Conference, Boston, October 1989.
- Wilhelm Pieck University, Rostock, GDR, September 1989.
- 2-day seminar, Zentrum für Graphische Datenverarbeitung, Darmstadt, FRG, November 1987.
- Eurographics '87 Conference, Amsterdam, August 1987.
- "Choreographing Goal-Oriented Motion Using Cost Functions"
- INESC, Lisbon, Portugal, July 1989.
- Computer Animation '89 Conference, Geneva, June 1989.
- "Message-Based Choreography for Computer Animation"
- Computer Animation '89 Conference, Geneva, June 1989.
- Zentrum für Graphische Datenverarbeitung, Darmstadt, FRG, May 1988.

COMPUTER-GENERATED IMAGES

List available upon request (25 items).

COMPUTER-GENERATED ANIMATION

List available upon request (5 items).

GRADUATE STUDENT SUPERVISION

Sean Mauch, "A Fast Marching Method for Computing Closest Points," California Institute of Technology, Pasadena, CA, 1997

Masaki Aono, *Computer-Aided Geometric Design for Forming Woven Cloth Composites*, Ph.D., Rensselaer Polytechnic Institute, Troy, NY, 1994

James Miller, On GDM's: Geometrically Deformed Models for the Extraction of Closed Shapes from Volume Data, M.S., Rensselaer Polytechnic Institute, Troy, NY, 1990

David Tonnesen, *A Window Based Object-Oriented User Interface for The Clockworks*, M.S., Rensselaer Polytechnic Institute, Troy, NY, 1989

Jay Hersh, *Tools for Particle Based Geometric Modeling*, M.Eng., Rensselaer Polytechnic Institute, Troy, NY, 1988

Volker Kühn, *Message-Based Object-Oriented Interaction Modeling*, Diplom, Technische Hochschule, Darmstadt, Germany, 1988

Brion Sarachan, A User Interface for Interactive Computer Animation Scripting, M.Eng., Rensselaer Polytechnic Institute, Troy, NY, 1986

Moh-Fung Shen, *Interactive 3-D Surface Design - BBSRF*, M.S., Rensselaer Polytechnic Institute, Troy, NY, 1986

THESIS COMMITTEE MEMBERSHIP

Ying Yang, *Cloth Modeling and Animation Using Viscoelastic Surfaces*, Ph.D., Federal Institute of Technology, Lausanne, Switzerland, 1994

UNDERGRADUATE STUDENT RESEARCH SUPERVISION

At RPI and Caltech I have worked with approximately 20 undergraduate students. Their research project topics included polygonal surface texture mapping, device communication interface, generating tubes from splines, interactive modeling interface, Steiner patch approximation methods, surface of revolution, computer animation, 3D geometric warping, calculating the shortest distance to a polygonal surface, geodesic distance isolines on an isosurface, 3D model morphing, multiresolution mesh extraction, level set segmentation of volume datasets, 3D procedural texture mapping and deformable meshes for segmentation.

REVIEWING TECHNICAL PAPERS

ACM Transactions on Graphics

ACM Transactions on Modeling and Computer Simulation

IEEE Transactions on Visualization and Computer Graphics

IEEE Computer Graphics and Applications

Graphical Models and Image Understanding

Computer-Aided Design

Journal of Visualization and Computer Animation

The Visual Computer

International Journal of Shape Modeling

Mathematical and Computer Modeling

Textile Research Journal

Journal of the Textile Institute

The Computer Journal

IEEE Press

SIGGRAPH Conference

Computer Animation Conference

Computer Graphics International Conference

Eurographics Conference

IFIP International Conference on Computer Graphics

International Conference on Shape Modeling and Applications

ACM Symposium on Interactive 3D Graphics

ACM Symposium on Solid Modeling and Applications

International Symposium on Parallel and Distributed Processing

International Workshop on Volume Graphics