

## CURRICULUM VITAE: Brian A. Barsky

### CONTACT:

#### Telephone Numbers:

Office (510) 642-9838  
CS Division (510) 642-1042

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CS Division (510) 642-5775  
Campus Telecommunications (510) 643-8245

#### E-mail:

barsky@cs.berkeley.edu

#### World Wide Web home pages:

<http://www.cs.berkeley.edu/~barsky/>

### RESEARCH INTERESTS:

Computational photography, contact lens design, computer methods for optometry and ophthalmology, image synthesis, computer aided geometric design and modeling, interactive and realistic three-dimensional computer graphics, visualization in scientific computing, computer aided cornea modeling and visualization, medical imaging, virtual environments for surgical simulation.

### EDUCATION:

9/78-6/81      Ph.D. in Computer Science  
University of Utah, Salt Lake City, Utah 84112, U.S.A.  
9/76-9/78      M.S. in Computer Graphics/Computer Science  
Cornell University, Ithaca, New York 14853, U.S.A.  
9/73-5/76      B.Sc. with Great Distinction in Mathematics/Computer Science  
McGill University, Montreal, Quebec, Canada H3C 3G1  
9/71-5/73      D.C.S. in Engineering  
McGill University, Montreal, Quebec, Canada H3C 3G1

### EXTERNAL EXAMINING BOARDS:

Multimedia University, Cyberjaya and Melaka, Malaysia  
City University of Hong Kong

### PROFESSIONAL EXPERIENCE:

9/05-8/06      Directeur de Recherche CNRS  
Laboratoire d'Informatique Fondamentale de Lille (LIFL)  
l'Université des Sciences et Technologies de Lille (USTL), France  
7/91-present      Professor of Computer Science  
Department of Electrical Engineering and Computer Sciences  
University of California, Berkeley, California 94720-1776, U.S.A.  
7/95-present      Affiliate Professor of Optometry  
University of California, Berkeley, California 94720-2020, U.S.A.

- 4/94-present Member of Vision Science Group  
University of California, Berkeley, California 94720-2020, U.S.A.
- 1/94-present Member of Bioengineering Group  
University of California, Berkeley and San Francisco
- 12/99-1/00 Distinguished Visiting Professor of Computer Science  
School of Computing  
National University of Singapore
- 9/98-8/99 Visiting Professor of Computer Science  
Department of Computer Science  
Hong Kong University of Science and Technology, Hong Kong
- 6/96-7/96 and 6/97-7/97 and 7/98 Visiting Professor of Computer Science  
Modélisation Géométrique et Infographie Interactive group  
l'Institut de Recherche en Informatique de Nantes, France  
and l'Ecole Centrale de Nantes, France
- 2/98-3/98 Visiting Professor of Computer Science  
Department of Computer Science  
University of Otago, Dunedin, New Zealand
- 9/91-7/92 Visiting Professor of Computer Science  
Department of Computer Science  
University of Toronto, Toronto, Ontario, Canada M5S 1A4
- 7/86-7/91 Associate Professor of Computer Science  
Department of Electrical Engineering and Computer Sciences  
University of California, Berkeley, California 94720-1776, U.S.A.
- 8/86-8/91 Adjunct Associate Professor of Computer Science  
Department of Computer Science  
University of Waterloo, Waterloo, Ontario, Canada N2L 3G1
- 7/81-7/86 Assistant Professor of Computer Science  
Department of Electrical Engineering and Computer Sciences  
University of California, Berkeley, California 94720-1776, U.S.A.
- 8/82-8/86 Adjunct Assistant Professor of Computer Science  
Department of Computer Science  
University of Waterloo, Waterloo, Ontario, Canada N2L 3G1
- 10/85-9/86 Attaché de recherche invité at Laboratoire Image  
l'Ecole Nationale Supérieure des Télécommunications, Paris, France
- 3/79-8/79 Visiting Researcher in Computer Aided Design/Manufacturing  
Sentralinstitutt for Industriell Forskning, Oslo 3, Norway
- 9/78-3/79 Teaching Assistant  
University of Utah, Salt Lake City, Utah 84112, U.S.A.
- 9/77-12/77 Teaching Assistant  
Cornell University, Ithaca, New York 14853, U.S.A.
- 9/76-8/77 Research Assistant in Computer Graphics  
Cornell University, Ithaca, New York, 14853, U.S.A.
- 5/75-8/75 Systems Analyst/Computer Programmer  
Operations Research and Systems Planning  
Canadian Pacific Research, Montreal, Quebec, Canada
- 1/75-5/75 Statistical Analyst/Computer Programmer  
McGill University, Montreal, Quebec, Canada, H3C 3G1

9/74-5/76                      Mathematics tutor  
   McGill Tutoring Service, Montreal, Quebec, Canada, H3C 3G1

**ACADEMIC AWARDS:**

Fellow of the American Academy of Optometry  
William Evans Fellowship (New Zealand)  
Fulbright Scholarship  
National Science Foundation Presidential Young Investigator Award  
IBM Faculty Development Award  
Regents' Junior Faculty Fellowship  
NSERC Postgraduate Scholarship  
University of Utah Graduate Research Fellowship  
Josephine Beam Scholarship  
NRC Postgraduate Scholarship  
Bourse de l'Enseignement supérieur  
Canadian Mathematical Congress Bursary  
J.W. McConnell Scholarship  
McGill University Scholarship  
Steinberg Bursary

**RESEARCH GRANTS:**

Principal Investigator for National Science Foundation Special Grant for Exploratory Research (SGER) "Computational Photography: Lighting and Focus"

Principal Investigator for National Science Foundation Special Grant for Exploratory Research (SGER) "Combined Micro- and Macro-Model for Simulation Cloth by Deriving Mechanical Behavior from Underlying Fabric Structure"

Principal Investigator for National Science Foundation Special Grant for Exploratory Research (SGER) "Vision-Realistic Rendering"

Principal Investigator for Microelectronics Innovation and Computer Research Opportunities (MICRO) research grant "Interactive Scientific Visualization of the Eye"

Principal Investigator for National Science Foundation research grant "Visualization and Simulation in Scientific Computing for the Cornea"

Co-Principal Investigator for National Science Foundation research grant "Virtual Environments for Telesurgery and Surgical Training: Efficient Computation, Visualization, and Interaction"

Co-Principal Investigator for National Science Foundation research grant "The GEO-WEB-CAD Project"

Principal Investigator for National Science Foundation Special Grant for Exploratory Research (SGER) "Developing New Geometric Modeling and Scientific Visualization Techniques for Curved Optical Surfaces"

Principal Investigator for the National Keratoconus Foundation grant "Computer Aided Geometric Modeling of the Keratoconic Cornea"

Principal Investigator for Microelectronics Innovation and Computer Research Opportunities (MICRO) research grant "Televisualization of Corneal Shape"

Co-Principal Investigator for France-Berkeley Fund grant "Geometric Modeling of the Cornea Using Videokeratography"/ "Modélisation géométrique de la cornée par vidéokératographie"

Principal Investigator for Hewlett-Packard grant "3D Modeling for Computer Graphics"

Principal Investigator for National Science Foundation research grant "Realistic Yet Efficient Image Synthesis"

Principal Investigator for Microelectronics Innovation and Computer Research Opportunities (MICRO) research grant "Efficient Algorithms for Global Illumination"

Principal Investigator for Digital Equipment Corporation grant "Integral and Rational Beta-spline Curves and Surfaces for Computer Graphics and Geometric Modelling"

Principal Investigator for National Science Foundation Presidential Young Investigator Award "2-D and 3-D Interactive Computer Modelling Systems"

Principal Investigator for Control Data Corporation grant "Computer Graphics and Computer Aided Geometric Design Using Beta-splines"

Principal Investigator for National Science Foundation Engineering Research Initiation grant "Algorithms to Integrate Antialiasing and Hidden Surface Calculations"

Principal Investigator for Microelectronics Innovation and Computer Research Opportunities (MICRO) research grant "Computer Graphics Techniques for Geometric Modeling"

**PROFESSIONAL SOCIETIES:**

- International Society for Contact Lens Research
- Fellow of the American Academy of Optometry
- Association for Research in Vision and Ophthalmology
- Association for Computing Machinery/SIGGRAPH
- National Computer Graphics Association
- IEEE Computer Society
- Canadian Man-Computer Communications Society
- Society for Industrial and Applied Mathematics

**OTHER PROFESSIONAL ACTIVITIES:**

- Keynote Speaker, VISIGRAPP (Int'l Joint Conf. on Computer Vision, Imaging and Computer Graphics Theory and Appl.), Angkor Wat, Cambodia, July 2008
- Keynote Speaker, 4th Conference on Digital Media and its Application in Museum and Heritage, Qingdao, China, 25-27 July 2008
- Invited Speaker, Graphicon 2008, Moscow, June 2008.
- Keynote Speaker, 12th WSEAS Int'l Conf. on Circuits, Systems, Comm., and Computers, Heraklion, Greece, July 23-25, 2008
- Program committee member, Pacific Graphics 2008, Tokyo, October 2008
- Program committee member, 2008 International Conference on Computational Science and its Applications (ICCSA 2008) Peru, August 2008
- Program committee member, Pacific Graphics 2007, Maui, October-November 2007
- Invited Speaker, 2007 International Conference on Computational Science and its Applications (ICCSA'07) Kuala Lumpur, August 2007

Invited speaker, 9th Int'l Conf. on Computer Graphics and Artificial Intelligence, Limoges, France, May 2006  
Invited speaker, 18th AFIG (Journées de l'Association Francaise d'Informatique Graphique), Strasbourg, France, Nov. 2005  
Program committee member, Pacific Graphics 2005, Macao (SAR) China, October 2005  
Keynote speaker, 4th WSEAS Int'l Conf. on Applied Math. and Computer Science, (AMCOS 2005), Rio de Janeiro, April 2005  
Keynote speaker, Symposium on Visualization and Virtual Reality in Human Performance and Wellness, Calgary, March 2005  
Invited speaker, Workshop on Image Processing and Related Mathematical Problems, Zhejiang, China, May 2004  
Program committee member, Pacific Graphics 2003, Canmore, Alberta, Oct. 2003  
Program committee member, CAD/Graphics'2003, Macao (SAR) China, October 2003  
Speaker, Catalonian Studies Program, Barcelona and Girona, September 2003  
Invited Speaker, 2003 International Conference on Computational Science and its Applications (ICCSA'03) Montreal, May 2003  
Program committee member, 2003 International Conference on Computational Science and its Applications (ICCSA'03) Montreal  
Program committee member, Pacific Graphics 2002, Beijing, Oct. 2002  
Sketches committee member, SIGGRAPH 2002, ACM, San Antonio, July 2002  
Program committee member, Pacific Graphics 2001, Tokyo, Oct. 2001  
Papers committee member, SIGGRAPH 2001, ACM, Los Angeles, August 2001  
Program committee member, CAD/Graphics'2001, Kummin, China, August 2001  
Program committee member, IEEE Virtual Reality 2001 (IEEE VR2001), Yokohama, Japan, March 2001  
Program committee member, Workshop Series on "Geometric Modeling: Fundamentals and Applications", IFIP Working Group  
Program Co-Chair, Pacific Graphics 2000, Hong Kong, Oct. 2000  
Keynote speaker, Int'l Conference on Information Visualisation IV'2000, London, July 2000  
Program committee member, Geometric Modeling and Processing 2000, Hong Kong, April 2000  
Program committee member, Virtual Reality 2000, New Brunswick, New Jersey, March 2000  
Program committee member, Pacific Graphics '99, Seoul, Oct. 1999  
Program committee member, IASTED Int'l Conference on Computer Graphics and Imaging (CGIM'99), Palm Springs, CA, Oct. 1999  
Keynote speaker, tutorial speaker, and session chair, Int'l Conference on Information Visualisation IV'99, London, July 1999  
Session Chair, Fourth Int'l Conference on Curves and Surfaces, Association Francaise d'Approximation, Saint-Malo, France, July 1999  
Invited Speaker and session chair, Int'l Workshop on the Application Techniques of Virtual Reality, Hangzhou, June 1999  
Session Chair, International Conference on Advanced Manufacturing Technology, Xi'an, China, June 1999  
Invited Speaker, Shape Modeling International '99, Aizu-Wakamatsu, Japan, March 1999  
Invited Speaker, Surface Approximation and Visualisation, Christchurch, New Zealand, February 1999  
Invited Speaker, IEEE Engineering in Medicine and Biology Society, workshop, Hong Kong, Oct. 1998  
Invited Speaker, Chinagraph, Guilin, October 1998  
Int'l Advisory Committee, Computer Aided Geometric Design: New Trends and Applications, Anogia, Crete, Greece, June 1997  
Invited exhibitor, ACM 97, San Jose, March 1997  
Speaker, Mopane 1996: Refraction and Keratometry: The Mathematics and Statistics, Mopani, South Africa, 3-5 Aug. 1996  
Lecturer, Eighth Int'l School for Computer Science Researchers, Lipari Island, Italy, July 1996  
Speaker, Virtual Reality and Movement Analysis, Marseille, June 1996  
Speaker, Europe-U.S.-France International Symposium III, Sophia-Antipolis, May 1996  
Program committee member, IDMMME, Nantes, April 1996  
Program committee member, Fourth Int. Conf. in Central Europe on Computer Graphics and Visualization '96 (WSCG '96), Feb. 1996  
Speaker, Spline Functions and Theory of Wavelets Conference, Montreal, January 1996  
Speaker, Images de Synthese Conference, Saint-Etienne, December 1995  
Speaker, Academy of Optometry meeting, New Orleans, December 1995  
Speaker, IEEE Engineering in Medicine and Biology '95 Conference, Montreal, September 1995  
Program committee member, Winter School of Computer Graphics '95, Plzen, Czech Republic, February 1995  
Speaker and Session chair, Third Int'l Conf. on Math. Methods in Comp. Aided Geom. Design, Ulvik, Norway, June 1994  
Invited speaker, International Symposium on New Aspects of Numerical Analysis, Stresa, Italy, September 1993  
Technical program committee member, SIGGRAPH '93, ACM, Anaheim, August 1993  
Session chair, IFIP Conference on Modeling in Computer Graphics, Genoa, Italy, June / July 1993,  
Session chair, CG International '93, Lausanne, Switzerland, June 1993  
Session chair, Computer Animation '93, Geneva, Switzerland, June 1993  
Session chair, Curves and Surfaces, Chamonix-Mont-Blanc, June 1993  
Speaker, Catalonian Studies Program, Barcelona, January 1993  
Plenary session invited speaker and tutorial speaker, Eurographics '92, Cambridge, England, September 1992

Instructor, Technology Transfer Corporation, Tel Aviv, Israel, May 1992  
Instructor, University of the Witwatersrand, Johannesburg, October 1991  
Program committee member, CAD/Graphics '91, Hangzhou, September 1991  
Invited speaker, 4th SIBGRAPI Congress, Sao Paulo, July 1991  
Program committee member, Graphics Interface '91, Calgary, June 1991  
Instructor, University of Oxford, Continuing Education, 1991, 1992  
Invited speaker, Workshop on Geometric Modeling, Rio de Janeiro, January 1991  
Course chair, SIGGRAPH'90, ACM, Dallas, 7 August 1990  
Mini-symposium chair, Curves and Surfaces, Chamonix-Mont-Blanc, 21-27 June 1990  
Keynote speaker and program committee member, Graphics Interface '90, Halifax, May 1990  
Organizing committee member and session chair, Curves and Surfaces in Comp. Vision and Graph., Santa Clara, Feb. 1990  
Organizer, *The Berkeley Series in Computer Graphics & Geometric Modeling*, 1989  
Mini-symposium speaker, SIAM Conference on Geometric Design, Tempe, November 1989  
Course speaker, PIXIM'89, Paris, September 1989  
Invited speaker, American Mathematical Society meeting, Boulder, Colorado, August 1989  
Course speaker, SIGGRAPH '89, ACM, Boston, August 1989  
Invited participant and session chair, NATO A.S.I. Computation of Curves and Surfaces, Puerto de la Cruz, July 1989  
Tutorial speaker, Latinoamerican Conference on Informatics, Santiago, Chile, July 1989  
Tutorial chair, speaker, and session chair, Graphics Interface '89, London, Ontario, June 1989  
Program committee member, Graphics Interface '89, London, Ontario, June 1989  
Invited Speaker, Hewlett-Packard Computer Graphics Symposium, Fort Collins, June 1989  
Session chair, Computer Graphics '89, Smolenice, Czechoslovakia, May 1989  
Speaker, NSF - Industry - University Symposium, IBM Thomas J. Watson Research Center, April 1989  
Organizer, NSF Workshop on Mechanics, Control, and Animation of Articulated Figures, MIT, April 1989  
Keynote speaker, Citicorp Transaction Technology Inc. Computer Graphics Seminar, Santa Monica, March 1989  
Instructor, Digital Equipment Corporation, Maynard, MA, January 1989  
Distinguished Lecturer, IBM Thomas J. Watson Research Center, Yorktown Heights, NY, December 1988  
Course speaker, Triad Fall Technical Conference, November 1988  
Course speaker, PIXIM'88, Paris, October 1988  
Course speaker, SIGGRAPH '88, ACM, Atlanta, August 1988  
Invited Speaker, Hewlett-Packard Computer Graphics Symposium, Fort Collins, June 1988  
Speaker, Conference on Mathematical Methods of Computer Aided Design, Oslo, June 1988  
Instructor, Digital Equipment Corporation, Nashua, N.H., December 1987  
Instructor, Berlin Continuing Education Program course, Berlin, September 1987  
Instructor, University of California at Berkeley, University Extension, 1987, 1988, 1989, 1990  
Speaker, SIAM Conference on Applied Geometry, Albany, July 1987  
Speaker, Research Conference on Geometric Design, Wayne State University, Detroit, May 1987  
Invited Speaker, Advanced Computer Graphics, Hewlett-Packard, April 1987  
Program Committee member, CESTA Cognitiva 87 -- Electronic Image  
Course speaker, SIGGRAPH '86, ACM, Dallas, August 1986  
Senior Reviewer, SIGGRAPH '86, ACM, Dallas, August 1986  
Invited speaker, International Summer Institute, Stirling, Scotland, June 1986  
Invited participant, Wolfenbuettel, West Germany, June 1986  
Invited speaker, 3èmes Rencontres Nouvelles Image, Pau, France, May 1986  
Invited speaker, ACM SIGGRAPH France, Paris, France, May 1986  
Course speaker and session chair, International Electronic Image Week, Nice, France, April 1986  
Invited speaker, Colloque "Synthese d'Image", Brest, France, April 1986  
Invited speaker, XI International Symposium on Computer Systems, Monterrey, Mexico, April 1986  
Member, Board of Advisors, *CAD/CAM Abstracts*, October 1985 - present  
Keynote speaker, Pan Pacific Computer Conference, Melbourne, Sept. 1985  
Technical Program Chair, SIGGRAPH '85, ACM, San Francisco, July 1985  
Course speaker, SIGGRAPH '85, ACM, San Francisco, July 1985  
Tutorial speaker, panel member, and session chair, Graphics Interface '85, Montreal, May 1985  
Speaker, Automotive Computer Graphics '84, Dearborn, Dec. 1984

Course speaker, SIGGRAPH '84, ACM, Minneapolis, July 1984  
Senior Reviewer, SIGGRAPH '84, ACM, Minneapolis, July 1984  
Tutorial speaker, Graphics Interface '84, Ottawa, May - June 1984  
Panel member, Graphics Interface '84, Ottawa, May - June 1984  
Invited speaker, Visual Dynamics: Showcase '83, Los Angeles SIGGRAPH, Nov. 1983  
Tutorial speaker, SIGGRAPH '83, ACM, Detroit, July 1983  
Tutorial speaker, Graphics Interface '83, Edmonton, May 1983  
Invited lecturer, Computer Graphics and Automation Symposium, Tunghai Univ., April 1983  
Tutorial speaker, InterGraphics '83, Tokyo, April 1983  
Minicourse instructor, CADCON West'83, Anaheim; East'83, Boston; West'84, San Francisco; West'85, Anaheim  
Instructor, Institute in Computer Science, UC Santa Cruz, 1982, 1983  
Session chair, CompCon '82, IEEE Computer Society, San Francisco, Feb. 1982

**COURSES TAUGHT:**

CS 39A: Introduction to Computer Animation  
CS 39G: Virtual Reality  
CS 39J: The Art and Science of Photography: Drawing with Light  
CS 184: Foundations of Computer Graphics  
CS 194-5: Advanced Digital Animation  
CS 194-7: The Art of Animation  
CS 284: Computer Aided Geometric Design and Modeling  
CS 294-5: Graphics and Virtual Reality  
CS 294-7: The Art of Animation  
CS 301: Teaching Techniques for Computer Science  
CNM 190-Sec. 2: Advanced Digital Animation

**COLLEGE AND DEPARTMENTAL COMMITTEES:**

Fifth Year Master's Program (co-chair)  
Undergraduate Study  
Letters and Science Computer Science major  
Student Awards & Competitions (Co-chair)  
Soda Safety  
Undergraduate Advising  
Undergraduate Admissions  
College of Engineering Bio-Manufacturing Building  
College of Engineering Bioengineering  
EECS Graduate Study/Prelims (Co-chair)  
EECS Preliminary Exams (Co-Chair)  
CS Competitions  
Industrial Liaison  
Faculty Recruiting  
Computer Needs and Resources  
Building Program  
Retreat (Chair)  
Major in Letters and Science (Co-chair)  
Reentry Program  
Undergraduate Admissions  
Undergraduate Advising  
Preliminary Examinations (Chair)  
Co-op Work-Study and Employment  
Publicity (Chair)  
Safety

Graduate Admissions  
Committee on Computing and Computer Science Education  
Student-Faculty Relations  
Instructional Laboratories  
Graduate Student Advisory

**STUDENTS SUPERVISED:**

Michael S. Downes, *Augmenting Ultrasound Data*, Ph.D. Thesis, May 2005.

Lillian Chu, *A Framework for Extracting Cloth Descriptors from the Underlying Yarn Structure*, Ph.D. Thesis. March 2005.

Woojin Matthew Yu, *Simulation of Vision through an Actual Human Optical System*, Master's Thesis, October 2001.

Daniel D. Garcia, *CWhatUC: Software Tools for Predicting, Visualizing and Simulating Corneal Visual Acuity*, Ph.D. Thesis. May 2000.

Zijiang Yang, *The Z-spline: An Interpolating Subdivision Surface Scheme for Smooth Modeling and Three-dimensional Morphing*, Ph.D. Thesis. Oct. 1997.

Lillian Chu, *Surface Representations in Corneal Topography*, Master's Thesis, May 1997.

Mark A. Halstead, *Efficient Techniques for Surface Design Using Constrained Optimization*, Ph.D. Thesis. May 1996.

Roger W. Kumpf, *Multivariate Corneal Visualization in the EyeView System*, Master's Report, May 1995.

Daniel D. Garcia, *GAMESMAN: A Finite, Two-Person, Perfect-Information Game Generator*, Master's Report. May 1995.

Michael E. Hohmeyer, *Robust and Efficient Surface Intersection for Solid Modeling*, Ph.D. Thesis. February 1992.

Paul S. Heckbert, *Simulating Global Illumination using Adaptive Meshing*, Ph.D. Thesis. April 1991.

Daniel J. Dyckman, *Modeling with Hierarchical B-Spline Curves*, Master's Report. January 1991.

Richard B. Kraft, *Splines through Lie Groups*, Master's Thesis. December 1990.

Daniel J. Filip, *Practical Considerations for Triangular Patch Surfaces*, Master's Thesis. December 1985.

Pauline Y. J. Ts'o, *Graphical Simulation of Hydrodynamics: Modeling and Rendering Waves* Master's Thesis. October 1985.

Anthony D. DeRose, *Geometric Continuity: A Parametrization Independent Measure of Continuity for Computer Aided Geometric Design*, Ph.D. Thesis. August 1985.

Steven D. Upstill, *The Realistic Presentation of Synthetic Images: Image Processing in Computer Graphics*, Ph.D. Thesis. August 1985.

Jane P. Wilhelms, *Graphical Simulation of the Motion of Articulated Bodies such as Humans and Robots, with Particular Emphasis on the Use of Dynamic Analysis*, Ph.D. Thesis. July 1985.

Mark E. Dippé, *Antialiasing in Computer Graphics*, Ph.D. Thesis. May 1985.

John R. Gross, *Software Tools for Computer Graphics Research and Development*, Master's Report. May 1984.

Kenneth P. Fishkin, *Applying Color Science to Computer Graphics*, Master's Thesis. December 1983.

Shinichiro Haruyama, *Stochastic Texture Generation*, Master's Report. June 1983.

Jane P. Wilhelms, *A Scanline Hidden Surface Algorithm with Anti-aliasing*, Master's Report. December 1982.

#### **EDITING:**

Area Editor, *Graphical Models*

Computer Science Series Editor, Course Technology Publishers

Computer Graphics Editor, Morgan & Claypool Publishers *Synthesis* digital library of engineering and computer science

Book Series Editor, *Computer Graphics and Geometric Modeling*, Morgan Kaufmann Publishers, Inc., Dec. 1988 to Sept. 2004

Guest Editor, *IEEE Computer Graphics and Applications*, Feb. 1986

#### **REFEREEING:**

*IEEE Transactions on Visualization and Computer Graphics*

*ACM Transactions on Graphics*

*ACM Transactions on Mathematical Software*

*Computer Graphics and Image Processing*

*The Computer Journal*

*IEEE Computer Graphics and Applications*

*IEEE Transactions on Pattern Analysis and Machine Intelligence*

*Journal of Approximation Theory*

*Constructive Approximation*

*Discrete & Computational Geometry*

*Computer Aided Geometric Design*

*Computer-Aided Design*

*International Journal of Parallel Programming*

*The Visual Computer*

*The Journal of Visualization and Computer Animation*

*International Journal of Computational Geometry and Applications*

#### **REVIEWING:**

IEEE Virtual Reality 2001

*ACM Computing Reviews*

National Science Foundation

California MICRO

Natural Sciences and Engineering Research Council of Canada  
The Department of Energy  
ACM SIGGRAPH  
Graphics Interface  
CG International  
Electronic Image  
Eurographics

**COMPUTER-GENERATED IMAGES AND ANIMATIONS:**

Garcia, Daniel D. and Barsky, Brian A., *The OPTICAL Project at UC Berkeley: Computer Aided Cornea Modeling and Visualization*, video in the Electronic Theatre, *ACM/SIGGRAPH '96*, New Orleans, 4-9 August 1996. Nominated for an Award in the Research category at the London Effects & Animation Festival, 19-21 November 1996. Being shown in a self-repeating videotape in a theater at Fujita Corporation, Tokyo.

Garcia, Daniel D. and Barsky, Brian A., *The OPTICAL Project at UC Berkeley: Computer Aided Cornea Modeling and Visualization*, still images in *ASCII*, Vol. 20, No. 233, November 1996, p. 311.

Brian A. Barsky, Francis J. M. Schmitt, and Wen-Hui Du, "Victor Hugo", 1986 ACM/SIGGRAPH Technical Slide Set.

Jane P. Wilhelms, Pauline Y. J. Ts'o, Kenneth P. Fishkin, Mark Dippé, and Brian A. Barsky, "Ribbon Man", 1985 ACM/SIGGRAPH Technical Slide Set.

Brian A. Barsky, Tony D. DeRose, and Mark D. Dippé, "Beta-spline Bottle with Different Bias and Tension Values", In *Computergraphia*, edited by Joan Scott, Gulf Publishing Company, 1984, p. 119.

Brian A. Barsky, Tony D. DeRose, and Mark D. Dippé, "Pewter Goblets with Different Tension Values", *PIXEL*, No. 20, front cover (5/1984). Also in the 1984 ACM/SIGGRAPH Technical Slide Set.

Brian A. Barsky, Tony D. DeRose, and Mark D. Dippé, "Three Beta-spline Objects with Increasing Tension Values and Different Textures", *PIXEL*, No. 14, front cover (9-10/1983). Also in *Computergraphia*, edited by Joan Scott, Gulf Publishing Company, 1984, p. 119, and in *Creative Computer Graphics*, edited by Annabel Jankel and Rocky Morton, Cambridge University Press, 1984, p. 33.

Brian A. Barsky, Tony D. DeRose, and Mark D. Dippé, "Beta-spline Bottle with Increasing Tension Values and Different Textures", *SIGGRAPH '83 Conference Proceedings*, ACM, back cover (25-29 July 1983). Also in the 1983 ACM/SIGGRAPH Technical Slide Set, in *Computergraphia*, edited by Joan Scott, Gulf Publishing Company, 1984, p. 119.

Brian A. Barsky, Tony D. DeRose, and Mark D. Dippé, "Christmas at Macy's", *Nikkei Computer*, front cover (27 June 1983). Also in the 1983 ACM/SIGGRAPH Technical Slide Set, in *Computergraphia*, edited by Joan Scott, Gulf Publishing Company, 1984, p. 118, and in *Computer Graphics for Designers and Artists*, by Isaac Victor Kerlow and Judson Rosebush, Van Nostrand Reinhold Company, 1986, p. 184.

**PUBLICATIONS:**

**Refereed Journal Articles**

Adrien Theetten, Laurent Grisoni, Claude Andriot, and Brian Barsky. "Geometrically Exact Dynamic Splines", *Computer-Aided Design*, Vol. 40, No. 1, Jan. 2008, pp. 35-48.

Brian A. Barsky, Michael J. Tobias, Derrick P. Chu, and Daniel R. Horn. "Elimination of Artifacts Due to Occlusion and Discretization Problems in Image Space Blurring Techniques", *Graphics Models*, Vol. 67, No. 6, Nov. 2005, pp. 584-599.

Brian A. Barsky, "In Memoriam: Jane Wilhelms", *IEEE Transactions on Visualization and Computer Graphics*, Vol. 11, No. 5, September 2005, pp. 481-482.

Brian A. Barsky, "A Fond Farewell", *IEEE Computer Graphics and Applications*, Vol. 25, No. 4, July 2005, pp. 6-7.

Brian A. Barsky, "Geometry for Analysis of Corneal Shape," in *Computational Geometry: Lectures at the Morningside Center of Mathematics*, edited by Ren-Hong Wang, joint publication as *Studies in Advanced Mathematics*, edited by S.-T. Yau, International Press (Providence, Rhode Island) / American Mathematical Society (Somerville, Mass.), 2003, pp. 33 - 56.

Fuhua (Frank) Cheng; Xuefu Wang; and Brian A. Barsky, "Quadratic B-spline Curve Interpolation" *Computers and Mathematics with Applications*, Vol. 41, No. 1-2, Jan. 2001, pp. 39-50.

Frank Fu-Chung Wang; Paul K. Wright; Brian A. Barsky; and Daniel C. H. Yang, "Approximately Arc-Length Parametrized C3 Quintic Interpolatory Splines", *Transactions of the ASME, Journal of Mechanical Design*, Vol. 121, No. 3, Sept. 1999, pp. 430-439.

Brian A. Barsky, "Computer Graphics: A Personal History", invited article, *IEEE Annals of the History of Computing*, Vol. 20, No. 2, April-June 1998, pp. 36-37. Special Issue on Computer Graphics.

Brian A. Barsky, Stanley A. Klein, and Daniel D. Garcia, "Gaussian Power with Cylinder Vector Field Representation for Corneal Topography Maps", *Optometry and Vision Science*, Vol. 74, No. 11, November 1997, pp. 917-925.

Xuefu Wang, Fuhua (Frank) Cheng and Brian A. Barsky, "Energy and B-Spline Interpolation", *Computer-Aided Design*, Vol. 29, No. 7, July 1997, pp. 485-496.

Brian A. Barsky, "Computer Aided Contact Lens Design and Fabrication Based on Spline Mathematics", *Contact Lens Spectrum*, Vol. 11, No. 4, April 1996, pp. 39-49.

Robert B. Mandell, Brian A. Barsky, and Carl Moore, "A New Lens for Keratoconus", *Contact Lens Spectrum*, Vol. 10, No. 12, December 1995, pp. 17-22.

Mark A. Halstead, Brian A. Barsky; Stanley A. Klein; and Robert B. Mandell, "A Spline Surface Algorithm for Reconstruction of Corneal Topography from a Videokeratographic Reflection Pattern", *Optometry and Vision Science*, Vol. 72, No. 11, November 1995, pp. 821-827.

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