

## Demetri Terzopoulos

Distinguished Professor and Chancellor's Professor of Computer Science  
University of California, Los Angeles

### Contact Information

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### Biography

Demetri Terzopoulos is a Chancellor's Professor of Computer Science at UCLA, where he holds the rank of Distinguished Professor and directs the UCLA Computer Graphics & Vision Laboratory. He is also Co-Founder and Chief Scientist of VoxelCloud, Inc. He is or was a Guggenheim Fellow, a Fellow of the ACM, IEEE, the Royal Society of London, and the Royal Society of Canada, and a Member of the European Academy of Sciences, the New York Academy of Sciences, and Sigma Xi. After graduating from McGill University and receiving the PhD degree in AI ('84) from MIT, he remained at the MIT Artificial Intelligence Lab as a research scientist through 1985. Prior to becoming an academic in 1989, he was a program leader at Schlumberger corporate research centers in California and Texas. He was Professor of Computer Science and Professor of Electrical & Computer Engineering at the University of Toronto until 2010. He joined UCLA in 2005 from New York University, where he held the Lucy and Henry Moses Professorship in Science and was Professor of Computer Science and Mathematics at NYU's Courant Institute from 2000.

Professor Terzopoulos is one of the most highly cited engineers and computer scientists according to ISI and other indexes, with more than 400 scholarly publications, including several volumes, spanning computer graphics, computer vision, medical imaging, computer-aided design, artificial intelligence/life, and related domains. He has delivered nearly 500 invited talks around the world on these topics, among them more than 100 distinguished lectures and keynote addresses.

Professor Terzopoulos is the recipient of an Academy Award for Technical Achievement from the Academy of Motion Picture Arts and Sciences for his pioneering work on realistic cloth simulation for motion pictures. The IEEE recognized him with its inaugural Computer Vision Distinguished Researcher Award "For his pioneering and sustained research on Deformable Models and their applications". His many other accolades include an award from the Association for the Advancement of Artificial Intelligence (AAAI) for his work on deformable models, a Helmholtz Prize and a Marr Prize citation from the IEEE for his work on active contours ("snakes"), two citations from the International Medical Informatics Association for his work on model-based medical image analysis, an award from the Japanese CG society, NICOGRAPH, for his work on human facial modeling and animation, awards from the International Digital Media Foundation and from Ars Electronica for his work on the artificial life simulation of animals, and six University of Toronto Arts and Science Excellence Awards. He has been a Killam Research Fellow of the Canada Council for the Arts, an E.W.R. Steacie Memorial Fellow of the Natural Sciences and Engineering Research Council of Canada, and an AI/Robotics Fellow of the Canadian Institute for Advanced Research. The Canadian Image Processing and Pattern Recognition Society cited him for his "outstanding contributions to research and education in Image Understanding" with its Young Investigator Award as well as with its Award for Research Excellence. The 30+ PhD theses that he has supervised include the winner of the 1996 ACM Doctoral Dissertation Award.

Professor Terzopoulos has served on DARPA, NSF, NIH, and National Academies advisory committees and on the Presidential Scientific Advisory Board of the Max Plank Institute for Informatics in Germany. He has been an organizer and/or program committee member of the major conferences in graphics, vision, medical imaging, AI, etc., and was a Program Chair of *IEEE CVPR 1998* and *Pacific Graphics 2004*, Program Advisor of *IEEE ICME 2013*, an Area Chair of *ICCV 2007*, and a Conference Chair of *SIGGRAPH/EG SCA 2005*. He is or was a founding member of the editorial boards of eight journals spanning the fields of vision, graphics, medical imaging, and applied math, and was a Series Editor of Springer-Verlag's *Lecture Notes in Computer Science*. He has been a consultant to several major American, Canadian, and Japanese corporations.

### Fields of Interest

**Primary:** Computer Graphics, Computer Vision, Medical Image Analysis, Computer-Aided Design, Artificial Intelligence/Life. **Secondary:** Machine Learning, Multimedia, Biomechanics, Robotics, Digital Signal Processing, Parallel Computation.

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**Education**

**Massachusetts Institute of Technology (MIT)** Cambridge, Massachusetts  
 Doctor of Philosophy in Artificial Intelligence from the Department of Electrical Engineering and Computer Science (February 1984). Thesis title: *Multiresolution Computation of Visible-Surface Representations*. Thesis advisors: Dr. Shimon Ullman (currently Samy and Ruth Cohn Professor of Computer Science and Applied Mathematics, Weizmann Institute of Science) and Dr. Sir J. Michael Brady, FRS, FEng, FIEE (formerly BP Professor of Information Engineering, Oxford University). Thesis committee: Professors Berthold K.P. Horn and Tomas Lozano-Perez. Ph.D. Minor Program: Digital signal processing.

**McGill University** Montreal, Canada  
 Master of Engineering in Electrical Engineering (June 1980). Thesis title: *Applying Co-Occurrence Matrices to Texture Classification*. Thesis advisor: Dr. Steven W. Zucker (currently David and Lucile Packard Professor of Computer Science and Electrical Engineering, Yale University).

Bachelor of Engineering in Honours Electrical Engineering with distinction (June 1978).

**Positions****Primary:**

**University of California, Los Angeles** Los Angeles, California  
 [July 2012 to present] Distinguished Professor (highest academic rank at the Univ. of California)  
 [July 2005 to present] Chancellor's Professor of Computer Science, UCLA Henry Samueli School of Engineering and Applied Science  
 [November 2007 to December 2011] Faculty Affiliate, Human Complex Systems (HCS) Interdepartmental Program, UCLA College of Letters and Sciences

**New York University** New York, New York  
 [September 2000 to August 2005] Lucy and Henry Moses Professor of Science  
 [September 2000 to August 2005] Professor of Computer Science and Mathematics, Courant Institute of Mathematical Sciences

**University of Toronto** Toronto, Canada  
 [July 1995 to May 2005] Professor, Department of Computer Science  
 [July 1995 to May 2005] Professor, Department of Electrical & Computer Engineering  
 [July 1994 to June 1995] Associate Chair, Department of Computer Science  
 [July 1989 to June 1995] Associate Professor, Department of Computer Science  
 [November 1989 to June 1995] Associate Professor, Department of Electrical & Computer Eng.

**Schlumberger Corporation** New York, New York  
**Schlumberger Laboratory for Computer Science** Austin, Texas  
 [January 1989 to September 1989] Program Leader, Modeling and Simulation  
**Schlumberger Palo Alto Research** Palo Alto, California  
 [May 1988 to December 1988] Program Leader, Visual Modeling  
 [December 1985 to May 1988] Member of the Research Staff

**Massachusetts Institute of Technology (MIT)** Cambridge, Massachusetts  
 [January 1984 to December 1985] Research Scientist, MIT Artificial Intelligence Laboratory

**Secondary:**

**VoxelCloud, Inc.** Los Angeles, CA  
 [January 2016 to present] Chief Scientist

**Shanghai Jiao Tong University** Shanghai, China  
 [June 2018 to present] Co-Director, SJTU-UCLA Center for Machine Perception and Inference  
 [January 2018 to January 2023] Advisory Professor

**University of Ontario Institute of Technology (UOIT)** Oshawa, Ontario  
 [July 2011 to present] Adjunct Professor, Faculty of Science

- University of Toronto** Toronto, Canada  
 [June 2005 to June 2010] Professor (Status Only), Department of Computer Science  
 [June 2005 to June 2010] Professor (Status Only), Department of Electrical & Computer Eng.
- Agency for Science, Technology and Research (A\*STAR)** Singapore  
 [December 2008] Visiting Professor, Institute for Infocomm Research (I<sup>2</sup>R)
- Université Paris Dauphine** Paris, France  
 [August 2006 to September 2006] Professeur Invité, Centre de Recherche en Mathématiques de la Décision (CEREMADE)
- University of California, Los Angeles** Los Angeles, California  
 [September 2004 to December 2004] Senior Fellow, Institute for Pure and Applied Mathematics (IPAM)
- IBM Corporation** San Jose, California  
 [July 2000 to September 2000] Visiting Professor, Almaden Research Center
- Intel Corporation** Santa Clara, California  
 [May 1997 to August 1998] Visiting Professor, Microcomputer Research Labs
- Digital Equipment Corporation** Cambridge, Massachusetts  
 [October 1995 to August 1996] Visiting Professor, Cambridge Research Laboratory
- Schlumberger Laboratory for Computer Science** Austin, Texas  
 [September 1989 to January 1992] Visiting Professor (part time)
- The Canadian Institute for Advanced Research** Toronto, Canada  
 [September 1989 to September 1995] Fellow, Artificial Intelligence and Robotics Program  
 [May 1988 to September 1989] Associate, Artificial Intelligence and Robotics Program
- Bell-Northern Research, Inc. (now Nortel Networks)** Montreal, Canada  
 [May to August 1980] Summer Intern
- McGill University** Montreal, Canada  
 [September 1978 to May 1980] Teaching Assistant, Department of Electrical Engineering
- National Research Council of Canada** Ottawa, Canada  
 [May to August 1978] Research Assistant, Herzberg Institute of Astrophysics  
 [May to August 1977] Research Assistant, Herzberg Institute of Astrophysics

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- Memberships** Fellow, Association for Computing Machinery ([www.acm.org](http://www.acm.org))  
 Fellow, The Institute of Electrical and Electronic Engineers ([www.ieee.org](http://www.ieee.org))  
 Fellow, The Royal Society of London ([www.royalsociety.org](http://www.royalsociety.org))  
 Fellow, The Royal Society of Canada ([www.rsc.ca](http://www.rsc.ca))  
 Member, The European Academy of Sciences ([www.eurasc.org](http://www.eurasc.org))  
 Member, The New York Academy of Sciences ([www.nyas.org](http://www.nyas.org))  
 Life Member, Sigma Xi ([www.sigmaxi.org](http://www.sigmaxi.org))
- Member, ACM Special Interest Group on Computer Graphics and Interactive Techniques  
 Member, IEEE Computer Society Pattern Analysis and Machine Intelligence Technical Committee  
 Member, IEEE Computer Society Visualization and Graphics Technical Committee  
 Member, IEEE Communication Society Multimedia Communications Technical Committee

**Awards****Achievement Awards:**

***CIPPRS Award for Research Excellence***, Canadian Image Processing and Pattern Recognition Society, June 2015.

***Computer Vision Distinguished Researcher Award***, IEEE PAMI, October 2007 (inaugural recipient). Cited “For his pioneering and sustained research on Deformable Models and their applications”.

***2005 Academy Award (Oscar) for Technical Achievement***, Academy of Motion Picture Arts and Sciences, January 2006. Cited for “pioneering work in physically-based computer-generated techniques used to simulate realistic cloth in motion pictures”.

***CIPPRS Young Investigator Award***, Canadian Image Processing and Pattern Recognition Society (CIPPRS), April 1998. Cited for “outstanding contributions to research and education in Image Understanding”.

***Dean’s Excellence Awards***, Faculty of Arts and Science, University of Toronto, 1999, 1997, 1996, 1994, 1993, 1992.

***Chairman’s Stipends for Excellence***, Department of Computer Science, University of Toronto, 1994, 1993, 1992, 1991.

***Prix Ars Electronica ’95 Computer Animation Honorary Award***, for “Artificial Fishes,” Austria, May 1995. Prix Ars Electronica is the premier competition for creative work with digital media.

***International Digital Media Foundation International Digital Media Award*** for Technical Excellence for production “Artificial Fishes and Go Fish!,” presented at *Multimedia ’94*, Toronto, May 1994. (Also nominee in the “Entertainment” and “Virtual Reality” award categories).

***The Governor General’s Academic Medal*** (the most prestigious academic award for graduating students at Canadian high schools), May 1973.

**Research Fellowships:**

***Thousand Talents Program Award***, Government of China, Shenzhen Institutes of Advanced Technology (SIAT), National Academy of Sciences, China, April 2015 (declined).

***Okawa Research Grant***, Okawa Foundation for Information and Telecommunications, November 2011–October 2012.

***Guggenheim Fellowship***, John Simon Guggenheim Memorial Foundation, July 2009–June 2010.

***IPAM Visiting Fellowship***, Institute for Pure and Applied Mathematics, UCLA, September–December 2004.

***Killam Research Fellowship***, The Canada Council for the Arts, 1998–2000.

***E.W.R. Steacie Memorial Fellowship***, Natural Sciences and Engineering Research Council of Canada, 1996–1998.

***EPSRC Visiting Fellowship***, University of Leeds, Leeds, UK, July 1996.

***CIAR AI and Robotics Fellowship***, Canadian Institute for Advanced Research, September 1989–1995.

**Publication Awards and Citations:**

***NVIDIA Best Paper Award*** for “Automatic segmentation of pulmonary lobes using a progressive dense V-network”, selected by the program committee as the best paper of the *Proc. Fourth MICCAI Workshop on Deep Learning in Medical Image Analysis (DLMIA 18)*, Granada, Spain, September 2018.

**MIG 2017 Best Paper Award** for “Position-Based Multi-Agent Dynamics for Real-Time Crowd Simulation,” selected by the program committee as the best paper of the *Tenth ACM SIGGRAPH International Conference on Motion in Games (MIG 2017)*, Barcelona, Spain, November 2017.

**Helmholtz Prize**, IEEE Computer Society 2013 “Test of Time Award for ICCV papers with significant impact on computer vision research” for the paper “Snakes: Active Contour Models,” *First International Conference on Computer Vision*, London, UK, June 1987.

**Graphical Models Top Cited Article 2005–2010** for the article entitled “Autonomous Pedestrians,” published in the journal *Graphical Models*, **59**(5–6), 2007. August 2010 certificate from Elsevier B.V.

**ICDSC 2007 Outstanding Paper** for “Virtual Vision and Smart Cameras,” selected by the program committee as one of the best papers of the *First ACM/IEEE International Conference on Distributed Smart Cameras*, Vienna, Austria, September 2007, and a refereed journal-length version was published in the *Proceedings of the IEEE*, 2008, Special Issue on “Distributed Smart Cameras.”

**2006 Technical Achievement Academy Award Citation**, for 1987 ACM SIGGRAPH paper *Elastically Deformable Models*, recognized by the Academy of Motion Pictures Arts and Sciences as “a milestone in computer graphics, introducing the concept of physically-based techniques to simulate moving, deforming objects.”

**VSSN 2005 Outstanding Paper** for article “Surveillance Camera Scheduling: A Virtual Vision Approach,” selected by the program committee as one of the best papers of the *Third ACM International Workshop on Video Surveillance and Sensor Networks (VSSN 05)*, Singapore, November 2005, and an extended version was published in the ACM SIGMM journal *Multimedia Systems*, 2006, Special Issue on “Multimedia Surveillance Systems.”

**SCA 2005 Outstanding Paper** for article “Autonomous Pedestrians” selected by the Program Committee of the *ACM SIGGRAPH/EG Symposium on Computer Animation*, Los Angeles, CA, August 2005, and a refereed journal-length version was published in the “Special Issue on SCA 2005” of the journal *Graphical Models*, 2007.

**SAE Outstanding Paper, 2005**, for “Environmental Modeling for Autonomous Virtual Pedestrians,” selected by the Society of Automotive Engineers as one of the most outstanding SAE technical papers of 2005 and reprinted in the *SAE 2005 Transactions Journal of Passenger Cars: Electronic and Electrical Systems*.

**The Best of Medical Informatics, 2003**, for *Medical Image Analysis* article “Deformable Organisms for Automatic Medical Image Analysis,” selected by the International Medical Informatics Association as one of the best of the preceding year and reprinted in the *IMIA Yearbook of Medical Informatics 2004*.

**Computers & Graphics 2001 Best Paper Award** for “The Virtual Stuntman: Dynamic Characters with a Repertoire of Motor Skills,” published in the journal *Computers & Graphics*, **25**(6), December 2001.

**Computers & Graphics 2001 Best Paper Award** (honorable mention) for paper “A Non-Self-Intersecting Adaptive Deformable Surface for Complex Boundary Extraction from Volumetric Images,” published in the journal *Computers & Graphics*, **25**(3), June 2001.

**MICCAI 2001 Best Paper** citation for article entitled “Deformable Organisms for Automatic Medical Image Analysis,” selected as a best paper by reviewers and Members of the Program Board of the *Third International Conference on Medical Image Computing and Computer Assisted Interventions*, Utrecht, The Netherlands, October 2001, and a refereed journal-length version was published in the “MICCAI 2001 Special Issue” of the journal *Medical Image Analysis*, **6**(3), September, 2002.

**The Best of Medical Informatics, 1999**, for *IEEE Transactions on Medical Imaging* article “Topology Adaptive Deformable Surfaces for Medical Image Volume Segmentation,” selected by the In-

ternational Medical Informatics Association as one of the best of the preceding year and reprinted in the *IMIA Yearbook of Medical Informatics 2001*.

**NICOGRAPH Paper Award**, for “Lip Shape Control with a Physics Based Muscle Model” (in Japanese), presented in the 12th NICOGRAPH Paper Contest, at NICOGRAPH '96, Tokyo, Japan, November 1996.

**AAAI Best Paper Award** for paper entitled “Energy Constraints on Deformable Models” presented at the *Sixth National Conference on Artificial Intelligence (AAAI '87)*, Seattle, WA, July 1987.

**David Marr Prize** citation for paper entitled “Snakes: Active contour models,” presented at the *First International Conference on Computer Vision*, London, UK, June 1987.

#### **Other Awards:**

**Recognition of Service Award**, Association for Computing Machinery, July 2005. Citation: “In Appreciation for Contributions to ACM: SCA'05.”

**SAE Excellence in Oral Presentation Award** for presentation entitled “Environmental Modeling for Autonomous Virtual Pedestrians,” W. Shao, D. Terzopoulos, delivered at the *2005 SAE Symposium on Digital Human Modeling for Design and Engineering*, Iowa City, IA, June 2005.

**Computer Graphics Forum 1995 Cover Competition Award** for image entitled “Artificial Fishes,” presented at the *EUROGRAPHICS '94* conference, September 1994.

#### **Major Awards to Supervised Graduate Students:**

2015 UCLA Henry Samueli School of Engineering and Applied Sciences Edward K. Rice Outstanding Doctoral Student Award to C. Jiang for his PhD dissertation “The material point method for the physics-based simulation of solids and fluids.”

2015 UCLA Computer Science Department Outstanding Graduating Master’s Student Award to Z. Xu for his MS dissertation “Stereo visual odometry with windowed bundle adjustment.”

2014 Cisco Outstanding Graduate Research Award to L.-F. Yu for his PhD dissertation “Data-driven optimization for modeling in computer graphics and vision.”

2009 Northrop Grumman Outstanding Graduate Student Research Award to S.-H. Lee for his PhD dissertation “Biomechanical modeling and control of the human body for computer animation”.

2009 UCLA Computer Science Department Outstanding Graduating PhD Student Award to S.-H. Lee for his PhD dissertation “Biomechanical modeling and control of the human body for computer animation”.

2003 TR100 Young Innovators Award to supervised PhD Student M.A.O. Vasilescu by *Technology Review* Magazine, cited for her research on TensorFaces and TensorTextures.

1996 Association for Computing Machinery (ACM) Doctoral Dissertation Award to supervised PhD dissertation published as: “Artificial animals for computer animation: Biomechanics, locomotion, perception, and behavior,” by Xiaoyuan Tu, Springer-Verlag, Berlin, 1999. (The first dissertation in computer graphics, the first dissertation by a female student, and the first dissertation from a Canadian university to win this top award for computer science dissertations.)

#### **Scholarships:**

Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship, held at MIT, 1980–83.

Fonds F.C.A.C. Quebec Postgraduate Scholarship B2, held at MIT, 1980–83 (full tuition award).

National Research Council of Canada Postgraduate Scholarship, held at McGill University, 1978–80.

Government of Quebec Postgraduate Scholarship B1, held at McGill University, 1978–80. (full tuition award).

J.W. McConnell Scholarship, McGill University, 1976–78 (full tuition award).

J.W. McConnell Entrance Scholarship, McGill University, 1975 (full tuition award).

The Centennial Fund Scholarship, awarded to the Top Graduate, High School of Montreal, 1973.

## Major Professional Honors

*Selected major professional honors are listed below. Appendix A (Page 35) lists additional professional honors.*

***Elected Fellow of the Royal Society of London***, April 2014. Citation: “Demetri Terzopoulos is an internationally renowned researcher in both computer vision and computer graphics and his work has helped to unify these two fields. He co-invented the seminal ‘active contours’ algorithm, which is widely used in computer vision. He pioneered the development of deformable models and their application to vision and graphics, as well as to related domains such as medical imaging and computer-aided design. In the field of artificial life, his ground-breaking work combines biomechanics with theories of intelligence, including motor control, perception, behavior, cognition and learning, to yield remarkably realistic computer simulations of humans and other animals.”

***Inaugurated as an EETN Honorary Member of the Hellenic Artificial Intelligence Society***, 2010. Citation “in recognition for his pioneering work in the field of Artificial Intelligence.”

***Elected Fellow of the Association for Computing Machinery (ACM)***, November 2007. Citation: “For contributions to computer graphics and vision.”

***Elected Fellow of the Royal Society of Canada***, Academy of Sciences, August 2006. Short citation: “Demetri Terzopoulos is an internationally renowned leader in computer vision and computer graphics whose work has contributed fundamentally to the ongoing unification of these two fields. He is famous for pioneering deformable models and for spearheading their application in vision and graphics, as well as in related domains such as medical imaging and computer-aided design.”

***Named ISI Highly Cited Researcher*** in the Engineering category, Thompson ISI, 2005.

***Elected Member of The European Academy of Sciences***, July 2002. Citation: “Elected for outstanding and lasting contributions to computer science and pioneering developments in the field of computer vision.”

***Elected Fellow of The Institute of Electrical and Electronics Engineers (IEEE)***, January 2001. Citation: “For contributions to the theory of deformable models and leadership in their application to computer graphics, computer vision, medical imaging and computer-aided design.”

***Appointed Distinguished Professor***, University of California, July 2012.

***Appointed to the first Chancellor’s Professorship in Computer Science***, University of California, Los Angeles, 2005.

***Appointed to the Lucy and Henry Moses Endowed Professorship in Science***, New York University, 2000.

***Elected to Membership in the New York Academy of Sciences***, April 1988.

***Inducted to Membership in Sigma Xi***, MIT Chapter, March 1983.

Offered Presidential Professorship in Computer Science, University of Utah, 2005 (declined).

Offered W.M. Keck Foundation Chair in Computer Science, University of Southern California, 2000 (declined).

Offered Professorial Chair in Computer Science at the Swiss Federal Institute of Technology (ETH), Zürich, Switzerland, 1997 (declined).



Certificate of Appreciation, December 2004, Institute for Pure and Applied Mathematics, University of California, Los Angeles, “For Contributions to the Multiscale Geometry and Analysis in High Dimensions Program at IPAM, September to December 2004.”

Certificate of Appreciation, December 2001, IEEE Computer Society, “For outstanding contributions to the organization of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) held December 2001 in Kauai, Hawaii.”

***Distinguished Lecturer at the following universities (see Appendix D, Page 65, for the details):***

Columbia University, Cornell University, Drexel University, Ecole Centrale de Paris, Georgia Institute of Technology, Johns Hopkins University, Indiana University-Purdue University Indianapolis, New York University, NEC Corporation (1998), Ohio State University, Oregon State University, Princeton University, Rutgers University, Siemens Corporate Research, Simon Fraser University, State University of New York at Stony Brook, University of British Columbia, University of California – Irvine, University of California – Los Angeles, University of California – Riverside, University of Central Florida, University of Delaware, University of Florida at Gainesville, University of Genova, University of Massachusetts at Amherst, University of Minnesota, University of Missouri – Columbia, University of South Florida, University of Southern California, University of Texas, Arlington, University of Toronto, Wayne State University, Xerox Palo Alto Research Center, Yale University, York University.

***Keynote/plenary speaker at the following conferences (see Appendix D, Page 65, for the details):***

ACM Genetic and Evolutionary Computation Conference (GECCO)  
 ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D)  
 ACM Symposium on Computational Geometry  
 American Society of Biomechanics Annual Meeting  
 APICS Mathematics/Statistics and Computer Science Joint Conference  
 British Machine Vision Conference (BMVC)  
 Canadian Mathematical Society Meeting  
 Chinese Conference on Computer Vision (CCCV)  
 CogSci Workshop on Physical and Social Scene Understanding  
 Computer Graphics International Conference (CGI)  
 Conference on Computer and Robot Vision (CRV)  
 Conference on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE)  
 EUROGRAPHICS Conference (EG)  
 Graphics Interface Conference (GI)  
 Hellenic Conference on Artificial Intelligence (SETN)  
 IDEAS Southern California Data Science Conference  
 IEEE International Conference on 3D Digital Imaging and Modeling (3DIM)  
 IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)  
 IEEE International Conference on Automatic Face and Gesture Recognition (FG)  
 IEEE International Conf on Intelligent Info Hiding and Multimedia Signal Processing (IIHMSP)  
 IEEE International Conference on Multimedia and Expo (ICME)  
 IEEE International Conference on Multimedia Technology (ICMT)  
 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)  
 IEEE Workshop on Camera Networks and Wide-Area Scene Analysis  
 IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA)  
 IEEE Workshop on Multimedia Signal Processing (MMSP)  
 IEEE Workshop on Modeling, Simulation, and Visual Analysis of Large Crowds  
 IEEE Workshop on Vision Meets Cognition: Functionality, Physics, Intentionality, and Causality  
 Intelligence in Medicine Summit (IMS)  
 International Conference on 3D Digital Imaging and Modeling (3DIM)  
 International Conference on Mathematical Methods for Curves and Surfaces  
 International Conference on Pervasive Technologies Related to Assistive Environments (PETRA)  
 International Conference on Scientific Computation and Differential Equations (SCICADE)  
 International Conference on Synthetic and Natural Hybrid Coding and 3D Imaging  
 International Ethological Conference (IEC)

International Joint Conference on Artificial Intelligence (IJCAI)  
 International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)  
 International Symposium on Visual Computing  
 Microsoft Conference on Computing in the 21st Century  
 New Zealand Conference on Image and Vision Computing  
 NOAA Fisheries Stock Assessment Workshop  
 North American Paleontology Convention (NAPC)  
 Pacific Conference on Computer Graphics and Applications (PG)  
 Portuguese Computer Graphics Conference  
 SIAM Conference on Geometric Design  
 Silicon Valley Future Forum AI & Investment Conference  
 Symposium of the Shanghai Society of Biomedical Engineering  
 Spanish Computer Graphics Conference (CEIG)  
 Teaching and Technology Annual Conference  
 Workshop on Mathematical Methods in Imaging and Vision  
 Workshop on Intelligent Virtual Agents (IVA)  
 WSEAS Multiconference on Circuits, Systems, Computers, and Communications (CSCC)

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### Research Grants

Principal Investigator or Co-Investigator on grants providing

- more than \$10M of research funding since joining UCLA in 2005,
- more than \$5M of research funding at New York University from 2000–2005,
- more than \$7M of research funding at the University of Toronto from 1989–2005 (the UofT deducts no overhead charges from government funding agency grants).

*Appendix B (Page 37) lists research grants.*

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### Publications

*More than 400 technical publications. Appendix C (Page 41) lists books, book chapters, refereed papers, etc.*

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### Companies and Patents

Co-founder (with X. Ding) of VoxelCloud, Inc., Los Angeles, Phoenix, Shanghai.

“Method, system, storage medium, and data structure for image recognition using multilinear independent component analysis,” M.A.O. Vasilescu, D. Terzopoulos, Assignee: New York University, United States Patent 7,693,299, April 6, 2010.

“Logic arrangement, data structure, system and method for multilinear representation of multi-modal data ensembles for synthesis, rotation and compression,” M.A.O. Vasilescu, D. Terzopoulos, Assignee: New York University, United States Patent 7,379,925, May 27, 2008.

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### Invited Talks

*Delivered nearly 500 invited talks internationally (see Appendix D (Page 65) for the details) at the following institutions:*

#### Academic Institutions:

Brandeis University (96)	Brigham Young University (99)
Brown University (95,92,99,03)	California Institute of Technology (93,88,02)
Carleton University (95)	Carnegie–Mellon University (96,94,89,84)
Centre Jacques Cartier (France) (99)	Columbia University (03,91,85)
Cornell University (99,91)	Courant Institute of Mathematical Sciences (02,84)
Ecole Centrale de Paris (06)	Ecole Normale Supérieure (06)
Ecole Polytechnique Fédérale de Lausanne (91)	Ewha Womans University (04)
Georgia Institute of Technology (96)	Harvard University (90)
Continued...	

Indiana University-Purdue University Indianapolis (11)  
 Institute for Pure and Applied Mathematics (04)  
 ISCTE (Lisbon) (91)  
 Korea Advanced Institute of Science and Technology (04)  
 Math. Sciences Research Inst. (Berkeley) (88)  
 McMaster University (97)  
 National Taiwan University (98)  
 Northwestern University (95)  
 Ohio State University (00)  
 Oxford University (10)  
 Purdue University (87)  
 Rutgers University (96)  
 Stanford University (11,93,88,86)  
 Swiss Federal Institute of Technology (ETH) Zurich (06)  
 University College London (99)  
 University of California, Berkeley (87,86)  
 University of California, Irvine (10,88)  
 University of California, Santa Barbara (87)  
 University of Central Florida (07,95)  
 University of Delaware (98)  
 University of Genova (06)  
 University of Hawaii, Manoa (88)  
 University of Leeds (96)  
 University of Maryland (84,99)  
 University of Massachusetts, Amherst (00)  
 University of Minnesota (88)  
 University of Osaka (98)  
 University of Rochester (97,95,94,94)  
 University of South Florida (07,88)  
 University of Texas, Arlington (10)  
 University of Tokyo (99)  
 University of Utah (05,99)  
 University of Wisconsin (87)  
 Waseda University (12,09,06)  
 Yale University (02,97,89)  
 Institute for Mathematics and its Applications (87,01)  
 Isaac Newton Institute for Mathematical Sciences (93)  
 Johns Hopkins University (09)  
 MIT (10,98,96,96,96,94,93,88,88,87,85,82)  
 McGill University (94,88,87,86)  
 National Polytechnic Institute of Grenoble (95)  
 New York University (02,01,99,84)  
 NYU School of Medicine (03)  
 Oregon State University (04)  
 Princeton University (99,98)  
 Queen's University (92)  
 Simon Fraser University (03)  
 State University of New York (Stony Brook) (00)  
 Université Paris Dauphine (06,95,94)  
 University of British Columbia (05,95)  
 University of California, Davis (97)  
 University of California, Los Angeles (07,05,04)  
 University of California, Santa Cruz (90)  
 University of Colorado, Boulder (98)  
 University of Florida, Gainesville (07,95,88)  
 University of Guelph (94)  
 University of Illinois, Urbana–Champaign (10,90,85)  
 University of Louisville (00)  
 University of Massachusetts (Medical School) (91)  
 University of Michigan (84)  
 University of Missouri, Columbia (06)  
 University of Pennsylvania (03,01,91,85)  
 University of Sheffield (England) (91)  
 University of Southern California (98,00)  
 University of Texas, Austin (90,89)  
 University of Toronto (11,94,90,89,88,84)  
 University of Washington (88)  
 Uppsala University (10)  
 Wayne State University (14,05)  
 York University (17,95,94)

### **Industrial and Government Laboratories:**

Atomic Energy of Canada Limited (93)  
 AT&T Bell Labs. (87,84)  
 Digital Human Research Center (Japan) (09)  
 Fairchild Camera and Instrument (84)  
 General Electric Global Research (02)  
 Google, Inc. (07)  
 Hitachi Ltd. (93)  
 Howard Hughes Medical Institute, Janelia (10,08)  
 IBM Thomas J. Watson Research Center (88)  
 IMPA (Rio de Janeiro, Brazil) (91)  
 INRIA (France) (14,06,99)  
 Intel Corporation (97,96)  
 Lawrence Livermore National Laboratory (97)  
 Macdonald Dettwiler Space & Adv. Robotics Ltd. (99)  
 Max Plank Institutes (Germany) (02,99)  
 MCC, Inc. (89)  
 Mitsubishi Electric Research Laboratory (97)  
 NASA Goddard Space Flight Center (87)  
 National Research Council of Canada (91)  
 NEC Corporation (Japan) (98)  
 Pixar, Inc. (00)  
 Royal Canadian Inst. for the Adv. of Science (00)  
 NHK Science and Technical Research Labs (Japan) (95)  
 Siemens Corporate Research (02)  
 Sony Computer Science Laboratory (98)  
 Thinking Machines Corp. (88,85)  
 Xerox Palo Alto Research Center (99,94,88)  
 ATR Institute International (Japan) (98,96,93,88)  
 Digital Equipment Corp. (94,93,89)  
 Disney Imagineering R&D, Inc., (09)  
 Fraunhofer Center for Research in Computer Graphics (01)  
 General Motors Research Labs. (84)  
 Hewlett-Packard (94)  
 Honda Research Institute, Inc. (00)  
 Hughes Aircraft Co. (89,89)  
 IBM Almaden Research Center (00)  
 Industrial Technology Research Inst. (Taiwan) (98)  
 Institute of Automation (China) (15)  
 Interval Research Corp. (94)  
 Lucent Technologies (96)  
 Massachusetts General Hospital (93)  
 Medialab, Inc. (France) (94)  
 Microsoft Corp. ((MSRC)14,(MSR)06,94)  
 Mount Sinai School of Medicine (03)  
 NASA Jet Propulsion Laboratory (07)  
 NEC Research Institute (94)  
 Nippon Telegraph & Telephone Co. (Japan) (93,90)  
 Ricoh Corp. (Japan) (88)  
 Royal Society of London (14)  
 Schlumberger Corp. (88,84)  
 Silicon Graphics (94)  
 SRI International (94,90,87,84)  
 Toppan Printing Company (Japan) (98)

### **University Service**

#### **University-Wide:**

Member, Virtual Reality Task Force, Reporting to the Executive Vice Chancellor and Provost, 2018.

Member, Advisory Committee, The Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, 2007–13.

Member, VC/CAP Ad Hoc Appointment and Tenure Review Committee, 2008–09.

Member, Vice Chancellor of Research's Committee on Advanced Games and Transformative Media, 2008–10.

Member, Council on Academic Personnel (CAP) Ad Hoc Review Committee, UC Irvine, 2008.

Member, Institute for Digital Research and Education (IDRE), Ad Hoc Recruitment Committee, 2008.

**School-Wide:**

FEC Honors and Awards Committee, Henry Samueli School of Engineering and Applied Science, 2018–19.

Elected Computer Science Departmental Representative to the Henry Samueli School of Engineering and Applied Science Faculty Executive Committee (FEC), 2017–20.

Member, Annual Research Review Committee, Henry Samueli School of Engineering and Applied Science, 2006–07.

**Departmental:**

Chair, Computer Graphics and Vision Field, Computer Science Department, 2017–18.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2017–18.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2017–18.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2017–18.

Chair, Computer Graphics and Vision Field, Computer Science Department, 2016–17.

Chair, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2016–17.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2016–17.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2016–17.

Chair, Computer Graphics and Vision Field, Computer Science Department, 2015–16.

Chair, Faculty Award Committee, Computer Science Department, 2015–16.

Chair, Computer Graphics and Vision Field, Computer Science Department, 2014–15.

Chair, Faculty Award Committee, Computer Science Department, 2014–15.

Chair, Bylaw 55 Committee, Computer Science Department, 2014–15.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2014–15.

Chair, Computer Graphics and Vision Field, Computer Science Department, 2013–14.

Chair, Faculty Award Committee, Computer Science Department, 2013–14.

Member, Bylaw 55 Committee, Computer Science Department, 2013–14.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2013–14.

Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2013–14.

Chair, Computer Graphics and Vision Field, Computer Science Department, 2012–13.

Chair, Faculty Award Committee, Computer Science Department, 2012–13.  
Member, Hiring Committee, Computer Science Department, 2012–13.  
Chair, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2012–13.  
Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2012–13.  
Chair, Computer Graphics and Vision Field, Computer Science Department, 2011–12.  
Chair, Faculty Award Committee, Computer Science Department, 2011–12.  
Member, Academic Policy Committee, Computer Science Department, 2011–12.  
Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2011–12.  
Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2011–12.  
Chair, Computer Graphics and Vision Field, Computer Science Department, 2010–11.  
Chair, Faculty Award Committee, Computer Science Department, 2010–11.  
Web Faculty Advisor, Computer Science Department, 2010–11.  
Web Faculty Advisor, Computer Science Department, 2009–10.  
Member, Faculty Award Committee, Computer Science Department, 2009–10.  
Member, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2009.  
Member, Faculty Award Committee, Computer Science Department, 2008–09.  
Member, Recruiting Committee, Computer Science Department, 2008–09.  
Member, Industrial Affiliates Committee, Computer Science Department, 2008–09.  
Member, Admission, TA and Fellowship Committee, Computer Science Department, 2008–09.  
Chair, Faculty Award Committee, Computer Science Department, 2007–08.  
Member, Admission, TA and Fellowship Committee, Computer Science Department, 2007–08.  
Member, Publicity Committee, Computer Science Department, 2007–08.  
Member, Ad Hoc Appointments Committee, Computer Science Department, 2006–07.  
Chair, Ad Hoc Appointments Committee, Computer Science Department, 2006–07.  
Chair, Ad Hoc Faculty Promotion Review Committee, Computer Science Department, 2006–07.  
Chair, Publicity Committee, Computer Science Department, 2006–07.  
Member, Recruiting Committee, Computer Science Department, 2006–07.  
Member, Website Committee, Computer Science Department, 2006.

**At New York University:**

Member, Provostial Committee on Courant Institute of Mathematical Sciences Directorship, 2005.  
Member, Faculty Appointments Committee, Computer Science Department, 2004–05, 2003–04, 2002–03, 2001–02.  
Chair, Faculty Tenure Review Subcommittee, Computer Science Department, 2003.  
Member, Faculty Tenure Review Subcommittee, Computer Science Department, 2004, 2003, 2003.

Member, Faculty Promotion Review Subcommittee, Computer Science Department, 2003.

Chair, Janet Fabri Memorial Prize Committee, Computer Science Department, 2002.

Member, Faculty 3-Year Review Subcommittee, Computer Science Department, 2001.

Faculty Mentor for Freshmen, Computer Science Dept., 2004–05, 2003–04, 2002–03, 2001–02.

**At the University of Toronto:**

*Service load at the UofT was greatly reduced by Killam, Steacie, and CIAR Fellowships.*

Associate Chair, Department of Computer Science, 1994–95.

Member, Department Council, Department of Computer Science, 1994–95.

Member, Graduate Committee, Department of Computer Science, 1989–90.

Member, Graduate Admissions Committee, Department of Computer Science, 1997–98.

Member, CSLab Committee, Department of Computer Science, 1999–00, 1998–99.

Chair, Library Committee, Department of Computer Science, 1991–92.

Member, Library Committee, Department of Computer Science, 1992–93, 1990–91.

Member, Dept'l Reading Evaluation Committee, Dept. of Computer Science, 2002, 1999, 1992.

Member, Misconduct Investigation Committee, Faculty of Arts and Sciences, 1998–99.

Member, Promotion and Tenure Review Committee, Department of Computer Science, 1997.

Member, Teaching Review Committee, 1997.

Chair, PhD Oral Examination Committee, School of Graduate Studies, 1992.

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**Teaching Experience**

Developed *CS 275 – Artificial Life for Computer Graphics and Vision*. Taught in quarters: Winter 2018, Spring 2017, Spring 2016, Spring 2015, Winter 2014, Spring 2012, Winter 2011, Winter 1010, Winter 2009, Spring 2008.

Developed *CS 269 – Advanced Topics in Artificial Intelligence: Deformable Models in Computer Vision* Advanced topics course on the mathematical and algorithmic fundamentals and computer vision applications of deformable models. Taught in quarters: Winter 2018, Fall 2016, Fall 2014.

Developed *CS 269 – Advanced Topics in Artificial Intelligence: Visual Modeling* Advanced topics course on model-based visual computing. Taught in quarters: Winter 2014, Winter 2012, Spring 2011, Winter 2010.

Developed *CS 269 – Advanced Topics in Artificial Intelligence: Artificial Life*. Advanced topics course on artificial life. Taught in quarters: Winter 2008, Spring 2007. Evolved into the CS 275 course above.

*CS 174A – Introduction to Computer Graphics*. Undergraduate core course in computer graphics. Taught in quarters: Spring 2017, Fall 2016, Winter 2016, Winter 2015, Fall 2013, Winter 2013, Winter 2012, Winter 2011, Winter 2009, Winter 2008, Spring 2007, Winter 2007.

*CS 274C – Computer Animation*. graduate core course on computer animation. Taught in quarters: Spring 2014.

*CS 174C/274C – Computer Animation*. Combined undergraduate/graduate core course on computer animation. Taught in quarters: Spring 2013, Winter 2009.

*CS 298 – Research Seminar*. Graduate directed research course. Taught in quarters: Spring 2018, Winter 2018, Fall 2017, Spring 2017, Winter 2017, Fall 2016, Spring 2016, Winter 2016, Fall

2015, Spring 2015, Fall 2014, Spring 2014, Winter 2014, Fall 2013, Spring 2013, Winter 2013, Fall 2012, Spring 2012, Winter 2012, Fall 2011, Spring 2011, Winter 2011, Fall 2010, Spring 2010, Winter 2010, Fall 2009, Spring 2009, Winter 2009, Fall 2008, Spring 2008, Winter 2008, Fall 2007, Spring 2007, Winter 2007, Fall 2006, Winter 2006.

*CS 596 – Directed Individual Study.* Graduate directed research course. Taught in quarters: Summer 2018, Spring 2018, Winter 2018, Fall 2017, Spring 2016, Winter 2016, Fall 2015, Spring 2015, Fall 2014, Spring 2014, Winter 2014, Fall 2013, Spring 2013, Winter 2013, Fall 2012, Summer 2012, Spring 2012, Winter 2012, Fall 2011, Spring 2011, Winter 2011, Fall 2010, Spring 2010, Winter 2010, Fall 2009, Spring 2009, Winter 2009, Fall 2008, Spring 2008, Winter 2006.

*CS 199 – Directed Research.* Undergraduate directed research course. Taught in quarters: Summer 2018, Spring 2017, Winter 2017, Fall 2016, Fall 2014, Summer 2014, Spring 2014, Winter 2009.

*Physical and Biological Modeling for Graphical Character Animation,* UCLA Extension Short Course. Spring 2008.

#### **At New York University:**

Developed *G22.3033-006: Artificial Life for Computer Graphics.* A graduate level course offered in the Computer Science Department. Lectures provide an in depth investigation of biomechanical, perceptual, behavioral, cognitive, developmental, and evolutionary methods for the computer graphics modeling and animation of plants and animals/humans. Taught in semesters: Spring 2005.

Developed *G22.3033-008 Visual Modeling.* A graduate level course offered in the Computer Science Department. Lectures provide a unified treatment of advanced physical and biological modeling for computer graphics and computer vision. Taught in semesters: Spring 2002, Spring 2003.

#### *Independent Study Supervisor:*

Chris Pennock, “Virtual Human Head-Eye Behaviors,” Spring 2005, Fall 2005  
 Sung-Hee Lee, “Biomechanical Modeling of the Neck,” Spring 2005, Fall 2005  
 Zhongshan Zhang, “A Physical Model Of Hair”, Spring 2004  
 Artemy Kolchinsky, NYU Gallatin School, “Role of Imitation in Origin of Communication Systems: A Multi-Agent Approach”, Fall 2003–Spring 2004  
 Svetlana Stenchenkova, “TensorTexture Rendering”, Fall 2003  
 Zhihua Wang, “Motion Capture Data Processing”, Spring 2003  
 Steven Gutstein, “Motion Capture Data Processing”, Spring 2003  
 David Gatenby, “A Dynamic Virtual Diver”, Fall 2002, Spring 2003  
 Kristofer Schlachter, “Synthetic Human Behaviors”, Spring 2003  
 Xiaojian Zhao, “Virtual Vision”, Spring 2003  
 Oleg Kim, “Modeling Fire”, Fall 2002  
 Wei Shao, “Human Modeling”, Spring 2003, Fall 2002, Fall 2001, Spring 2001  
 Brian Muller, “Script Modeling Tool”, Spring 2001, Fall 2001  
 Xin Zhang, “Texture Synthesis”, Spring 2001

#### **At the University of Toronto:**

*Teaching load at the UofT was greatly reduced by Killam, Steacie, and CIAR Fellowships.*

Developed *CSC 2521H: Special Topics in Computer Graphics: Artificial Life.* An advanced graduate level course offered in the Department of Computer Science, UofT, Spring 2004. Lectures provide a broad review of artificial plants and animals, including biomechanical, perceptual, behavioral, cognitive, and evolutionary methods. Taught in semesters: Spring 2004.

Developed *CSC 2530H: Visual Modeling.* An advanced graduate level course offered in the Department of Computer Science, UofT, since 1989. Lectures provide an in-depth treatment of physics-based modeling for computer vision and graphics. Taught in semesters: Spring 1994, Spring 1993, Spring 1992, Spring 1991, Fall 1989.

Developed *CSC 199Y: Computers and Images*. A 2-semester undergraduate course offered in academic year 2000–01 to selected first-year UofT students across all departments. Lectures provide a unified treatment of digital image synthesis and analysis by computer. Taught in semesters: Spring 2001, Fall 2000.

*CSC 418H/2504H: Computer Graphics*. The combined 4th-year undergraduate/graduate core course in computer graphics. Taught in semesters: Spring 2004.

*CSC260H: Introduction to Scientific, Symbolic, and Graphical Computing*. A 2nd-year undergraduate course. Taught in semesters: Spring 2004.

## Research Supervision

### Industry:

Intel Corp., 1997–1998, Directed a research group comprising 5 PhDs and 3 MSs.

Schlumberger, Inc., 1988–1989, Directed research groups comprising 5 PhDs.

### Visiting Scholars Hosted:

Prof. Jianbing Shen, Beijing Institute of Technology, China, Sabbatical at UCLA, 08/16–07/17.

Prof. Kang Hoon Lee, Kwangwoon University, Korea, Sabbatical at UCLA, 08/14–08/15.

Prof. Hyungjun Park, Chosun University, Korea, Sabbatical at UCLA, 07/08–02/10.

Prof. Shigeo Morishima, Seikei University, Japan, Sabbatical at the University of Toronto, 9/95–8/96.

### Postdoctoral Researchers Supervised:

Dr. Masaki Nakada, Postdoctoral Scholar, 01/18–present.

Dr. Xiaowei Ding, Assistant Researcher, 04/16–present.

Dr. Theodore F. Gast, Postdoctoral Scholar, 07/17–06/18. Continued to co-founder and CEO of Jixie Effects, Inc., Los Angeles, CA.

Dr. Chenfanfu Jiang, Postdoctoral Scholar, 06/15–06/17. Continued to Assistant Professor of Computer and Information Sciences, University of Pennsylvania, Philadelphia, PA.

Dr. M. Alex O. Vasilescu, Assistant Researcher, 11/09–06/13. Continued to Lecturer of Computer Science, UCLA.

Dr. Antonio Roque, CIA Postdoctoral Fellow and Assistant Researcher, 08/10–10/12. Continued to employment in industry.

Dr. Eftychios Sifakis, Postdoctoral Scholar, 09/07–12/10. Continued to Assistant Professor of Computer Science, University of Wisconsin, Madison, WI.

Dr. Sung-Hee Lee, Postdoctoral Scholar, 11/08–06/09. Continued to Assistant Professor, Gwangju Institute of Science and Technology, Gwangju, South Korea.

Dr. Jinho Park, Korea Research Foundation Postdoctoral Fellow, 10/08–06/09. Continued to Assistant Professor, Namseoul University, Chonan, South Korea.

Dr. Tatsuo Yotsukura, Postdoctoral Fellow, 12/06–03/07, Continued to Researcher Advanced Telecommunications Research (ATR) Laboratories, Kyoto, Japan.

Dr. Jinwook Kim, Postdoctoral Fellow, 02/06–06/06. Continued to Researcher at Korea Institute of Science and Technology (KIST), Seoul, Korea. Also, Postdoctoral Fellow, NYU CS, 07/05–01/06. Continued to Postdoc at UCLA.

Dr. Ghassan Hamarneh, Research Fellow, UofT CS, 09/00–12/01. Continued to Simon Fraser University, Burnaby, BC.



Dr. Michel Pitermann, UofT CS and Queen's U., 04/98–03/00. Continued to Universite de Provence, Aix-en-Provence, France.

Dr. Jacques-Olivier Lachaud, Lavoisier Fellow (France), UofT CS, 09/98–9/99. Continued to Assistant Professor of Computer Science, University of Bordeaux, France.

Dr. Tamer F. Rabie, Postdoctoral Fellow, UofT CS, 01/99–12/99; Continued to Assistant Professor of Electrical and Computer Engineering, Ryerson University, Toronto, ON.

Dr. Jianming Liang, Research Fellow, UofT CS, 04/98–03/99. Continued to Siemens Corp., Malvern, PA.

Dr. Timothy J. McInerney, NSERC Postdoctoral Fellow, UofT CS, 01/98–01/99. Continued to Assistant Professor of Computer Science, Ryerson University, Toronto, ON.

Dr. Jorge C. Lucero, UofT CS and Queen's U., 08/15/96–07/31/97. Continued to Associate Professor of Mathematics, University of Brazilia, Brazil.

Dr. Paul Fieguth, NSERC Postdoctoral Fellow, UofT CS, 01/96–08/96. Continued to Assistant Professor of Electrical Engineering, University of Waterloo, Waterloo, ON.

#### **Research Scientists Supervised:**

M. Alex O. Vasilescu, Research Scientist, NYU CS, 01/01–08/05. Continued to Research Scientist at MIT Media Lab.

Mauricio Plaza-Villegas, Research Scientist, NYU CS, 07/03–05/04. Continued to employment on Wall Street.

Jared M. Silver, Research Scientist, NYU CS, 06/03–12/04. Continued to freelance animation artist.

Yuencheng Lee, Research Scientist, NYU CS, 01/01–05/03. "Retired" to a Buddhist monastery.

#### **Doctoral Students Graduated:**

Tomer Weiss, PhD, CS, April 2018;

Thesis: "A Constraint-Based Approach to Crowd Simulation and Layout Synthesis." Continued to software engineer at Wayfair, Inc., Boston, MA.

Masaki Nakada, PhD, CS, December 2017;

Thesis: "Deep Learning of Neuromuscular and Sensorimotor Control with Biomimetic Perception for Biomechanical Human Animation." Continued to postdoctoral scholar, UCLA CS Dept, Los Angeles, CA.

Noah Lawrence Duncan, PhD, CS, December 2017;

Thesis: "Zoomorphic Design, Interchangeable Components, and Approximate Dissections: Three New Computational Tools for Open-Ended Geometric Design," Continued to Co-Founder and CTO at Clovi, Inc., San Francisco, CA.

Eduardo Ribeiro Poyart, PhD, CS, December 2016;

Thesis: "Parallel, Data-Driven Simulation and Visualization of the Heart." Continued to employment at Google, Inc., Mountain View, CA.

Matthew Wang, PhD, CS, October 2016;

Thesis: "Simulation, Stitching, and Interaction Techniques for Large-Scale Ultrasound Datasets." Continued to employment at SonoSim, Inc., Santa Monica, CA.

Sharath Kumar Gopal, PhD, CS, October 2016;

Thesis: "Unified Deterministic/Statistical Deformable Models for Cardiac Image Analysis." Continued to employment in industry – Amazon Lab126, Cupertino, CA.

Gergely Klár, PhD, CS, May 2016; Thesis: “Simulation of Granular Media with the Material Point Method.” Continued to employment in industry – DreamWorks Animation SKG, Inc.

Xiaowei Ding, PhD, CS, July 2015; Thesis: “Automated Quantitative Analysis of Cardiac Medical Images.” Continued to co-found VoxelCloud, Inc., Los Angeles, CA.

Chenfanfu Jiang, PhD, CS, June 2015; Thesis: “The Material Point Method for the Physics-Based Simulation of Solids and Fluids.” Continued to Postdoctoral Scholar, UCLA CS and Math Depts, Los Angeles, CA. (**Winner of the 2015 UCLA Henry Samueli School of Engineering and Applied Sciences Edward K. Rice Outstanding Doctoral Student Award.**)

Jingyi Fang, PhD, CS, March 2015; Thesis: “The Modeling and Animation of Myriapoda.” Continued to employment at Google, Inc., Mountain View, CA.

Wenjia Huang, PhD, CS, September 2014; Thesis: “Door and Doorway Etiquette for Autonomous Pedestrians.” Continued to employment at Amazon Game Studios, Irvine, CA.

Jin Kyu Gahm, PhD, CS, March 2014; Thesis: “Microstructural Feature-Based Processing and Analysis of Diffusion Tensor MRI.” Continued to Postdoctoral Scholar, UCLA Biomechanical Engineering Department, Los Angeles, CA.

Krešimir Petrinc, PhD, CS, December 2013; Thesis: “A Laptop Computer Based Interactive Ultrasonography Trainer with Patient-Specific Image Simulation and Soft-Tissue Deformation.” Continued to Lead Software Engineer, SonoSim, Inc., Santa Monica, CA.

William R. Hewlett II, PhD, CS, August 2013; Thesis: “Creating a Cognitive Agent in a Virtual World: Planning, Navigation, and Natural Language Generation.” Continued to Staff Research Engineer, Palo Alto Networks, Inc., Santa Clara, CA.

Lap-Fai (Craig) Yu, PhD, CS, June 2013; Thesis: “Data-Driven Optimization for Modeling in Computer Graphics and Vision.” (**Winner of the 2014 Cisco Outstanding Graduate Research Award**) Continued to Assistant Professor, Computer Science Department, University of Massachusetts, Boston, MA.

Weiguang Si, PhD, CS, June 2013; Thesis: “Realistic Simulation and Control of Human Swimming and Underwater Movement.” Continued to Postdoctoral Fellow, Stanford University.

Gautam Prasad, PhD, CS, May 2013; Thesis: “Brain Mapping Methods: Segmentation, Registration, and Connectivity Analysis.” Continued to Postdoctoral Fellow, Stanford University, Stanford, CA.

M. Alex O. Vasilescu, PhD, UofT CS, June 2009; Thesis: “A Multilinear (Tensor) Algebraic Framework for Computer Graphics, Computer Vision, and Machine Learning.” Continued to Research Assistant Professor, UCLA.

Sung-Hee Lee, PhD, CS, October 2008; Thesis: “Biomechanical Modeling and Control of the Human Body for Computer Animation.” (**Winner of the 2009 UCLA Computer Science Outstanding PhD Award and Winner of the 2009 Northrop Grumman Outstanding Graduate Student Research Award**) Continued to Assistant Professor, School of Information and Communications, Gwangju Institute of Science and Technology, Korea.

Faisal Z. Qureshi, PhD, UofT CS, January 2007; Thesis: “Intelligent Perception in Virtual Sensor Networks and Space Robotics.” Continued to Assistant Professor, University of Ontario Institute of Technology (UOIT).

Qinxin Yu, PhD, UofT CS, January 2007; (NSERC Postgraduate Scholar) Thesis: “A Decision Network Framework for the Behavioral Animation of Virtual Humans.” Continued to AI Engineer, Artificiallife Inc., Montreal, Canada.

Wei Shao, PhD, NYU CS, January 2006; Thesis: “Animating Autonomous Pedestrians.” Continued to Member of Technical Staff, Google, Inc., Kirkland, WA.

Sageev Oore, PhD, UofT CS, November 2001; Thesis: “Digital Marionette: Augmenting Kinematics With Physics for Multi-Track Desktop Performance Animation.” Continued to Assistant Professor of Computer Science, St. Mary’s University, Halifax, NS.

Petros Faloutsos, PhD, UofT CS, November 2001; Thesis: “Composable Controllers for Physics-Based Character Animation.” Continued to Assistant Professor of Computer Science, University of California, Los Angeles, CA.

Tamer F. Rabie, PhD, UofT ECE, January 1999; Thesis: “Animat vision: Active Vision in Artificial Animals.” Continued to Assistant Professor, Department of Electrical and Computer Engineering, Ryerson University, Toronto, ON.

David L. Tonnesen, PhD, UofT CS, September 1998; Thesis: “Dynamically Coupled Particle Systems for Geometric Modeling, Reconstruction, and Animation.” Continued to Researcher, Alias—Wavefront, Inc., Seattle, WA.

Radek Grzeszczuk, PhD, UofT CS, May 1998; Thesis: “NeuroAnimator: Fast Neural Network Emulation and Control of Physics-Based Models.” Continued to Research Scientist, Intel Corporation, Santa Clara, CA.

Timothy J. McInerney, PhD, UofT CS, January 1997; (NSERC Postgraduate Scholar) Thesis: “Topologically Adaptable Deformable Models for Medical Image Analysis.” Continued to NSERC Postdoctoral Fellow, MIT Artificial Intelligence Lab, Cambridge, MA, and Assistant Professor, Department of Mathematics, Physics, and Computer Science, Ryerson University, Toronto, ON.

Xiaoyuan Tu, PhD, UofT CS, January 1996; Thesis: “Artificial Animals for Computer Animation: Biomechanics, Locomotion, Perception, and Behavior.” (**Winner of the 1996 ACM Doctoral Dissertation Award**) Continued to Research Scientist, Silicon Graphics Inc., Mountain View, CA.

Hong Qin, PhD, UofT CS, October 1995; Thesis: “D-NURBS: Dynamic Non-Uniform Rational B-Splines.” Continued to Assistant Professor of Computer Science, State University of New York, Stony Brook, NY.

Luiz Velho, PhD, UofT CS, February 1994; Thesis: “Piecewise Descriptions of Implicit Surfaces and Solids.” Continued to Associate Professor, Instituto de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Brazil.

Dimitris N. Metaxas, PhD, UofT CS, November 1992; Thesis: “Physics Based Modeling of Non-rigid Objects for Vision and Graphics.” Continued to Assistant Professor of Computer Science, University of Pennsylvania, Philadelphia, PA.

#### **Masters Students Graduated:**

Kevin Huynh, MS, UCLA CS, September 2018

Project: “Solving the problem of whole-language simulation: A case study from Tongan loanword adaptation”

Xingjian Yan, MS, UCLA CS, August 2018;

Project: “Fast and accurate self-supervised CNNs for affine and deformable lung registration.” Continued to employment in industry — VoxelCloud, Inc., Los Angeles, CA.

Dan Fang, MS, UCLA CS, June 2018;

Project: “MVFR: Multiple viewpoint face recognition.” Continued to employment in industry.

Ziran Ling, MS, CS, June 2018;

Project: “Deep learning for human biomechanical doodling.” Continued to employment in industry — Houzz, Inc., Palo Alto, CA.

Qi Qu, MS, UCLA CS, June 2018;

Project: “See-Flower: Fine-grained flower image classification using deep transfer learning.” Continued to employment industry — IXL Learning, Inc., San Mateo, CA.

- Taylor Caulfield, MS, UCLA CS, June 2018; Project: “YOLOTrainer: Automatic training set creation with distance information and object tracking.” Continued to employment in industry.
- Luna Xinyuan Li, MS, UCLA CS, April 2018. Project: “Predicting mobile handovers using domain knowledge independent models.” Continued to employment in industry — Amazon Lab126, Sunnyvale, CA.
- Therese Horey, MS, UCLA CS, March 2018; Project: “An Augmented Reality Android Application Utilizing Named Data Networking.” Continued to employment in industry.
- Zhihao Wu, MS, UCLA CS, March 2018; Project: “Pulmonary Nodule Detection via 3D ConvNets in Tensorflow.” Continued to employment in industry — VoxelCloud, Inc., Los Angeles, CA.
- Pranav Sodhani, MS, UCLA CS, October 2017; Project: “Face Recognition using Space Variant Sensors.” Continued to employment in industry — Apple, Inc., Cupertino, CA.
- Theresa Tong, MS, UCLA CS, June 2017; Project: “Evolution of Prey and Predator Behavior in a Simulated Environment.” Continued to employment in industry.
- Tonislav I. Ivanov, MS, UCLA CS, March 2017; (National Defense Science and Engineering Fellow) Project: “Early Prediction of Viable Blastocysts Using Automatically Extracted Embryo Division Timings.” Continued to employment in industry.
- Tianlin Chen, MS, UCLA CS, January 2017; Project: “The Anxiety Mitigator: Soothing Visitors Suffering From Anxiety by Automatically Finding, Classifying, and Presenting Helpful Web-Based Articles.” Continued to employment in industry.
- Praveen Sundar Govindarajan, MS, UCLA CS, December 2016; Project: “Learning-Based AI for Autonomous Combat Games”. Continued to employment in industry.
- Yuxi Zhang, MS, UCLA CS, October 2016; Project: “Simulation of an Ecosystem Involving Predators and Prey”. Continued to employment in industry – Google, Inc., Mountain View, CA.
- Brian Kim, MS, UCLA CS, September 2016; Project: “Virtual Keyboard: An Alternative to Physical Keyboards with a Touchless Interface Based on Finger Movements”. Continued to employment in industry.
- Huan-Sony Nguyen, MS, UCLA CS, June 2016; Project: “An Implementation of Ray Tracing and Path Tracing”. Continued to employment in industry – Facebook, Inc., Menlo Park, CA.
- Alan Ulfers Litteneker, MS, UCLA CS, May 2016; Thesis: “Virtual Cinematography Using Optimization and Temporal Smoothing”. Continued to PhD program in CS, UCLA.
- Eric Kim, MS, UCLA CS, May 2016; Thesis: “A Part-Based, Multiresolution, TensorFaces Approach to Image-Based Facial Verification”. Continued to employment in the UCLA School of Dentistry.
- Han Wang, MS, UCLA CS, May 2016; Project: “AcFR: Active Face Recognition Using Convolutional Neural Networks”. Continued to employment in industry – Amazon, Inc.
- Ziqiang Shi, MS, UCLA CS, March 2016; Project: “Creating Low-Poly Art the Easy Way”. Continued to employment in industry – CompHawk, LLC.
- Ali Kouhzadi, MS, UCLA CS, January 2016; Thesis: “A Comprehensive Study of the Seminal Monte-Carlo-Based Image Synthesis Algorithms”. Continued to employment in industry – DreamWorks Animation SKG, Inc.
- Timothy David Chan, MS, UCLA CS, July 2015; Project: “A Self-Calibrating Zoom Stereo System”. Continued to employment in industry.
- Sunny D. Suthar, MS, UCLA CS, June 2015; Project: “Crowd-Sourced 3D Reconstruction Using Uncalibrated Stereo Correspondence”. Continued to employment in industry.

Zhinan Xu, MS, UCLA CS, March 2015; Thesis: “Stereo Visual Odometry With Windowed Bundle Adjustment”. (**Winner of the 2015 UCLA Computer Science Outstanding Graduating Master’s Student Award**) Continued to employment in industry – Google, Inc., Mountain View, CA.

Daniel Roshan Doolabh, MS, UCLA CS, March 2015; Project: “An Object-Oriented Approach to Lindenmayer Systems Using Recursion”. Continued to employment in industry – Disney ABC Television Group, Burbank, CA.

Justin Allan Bass, MS, UCLA CS, March 2015; Project: “DNA Sequence Alignment Non-Gap Penalties and Gains”. Continued to employment in industry – ViaSat, Inc., Carlsbad, CA.

Nicholas Brett Marcott, MS, UCLA CS, March 2015; Project: “Digit Detection Using Adaptive Spline Models”. Continued to employment in industry – Apple, Inc., Cupertino, CA.

Tianyuan Qin, MS, UCLA CS, March 2015; Project: “Dynamic Destruction of Geometry Using Voronoi-Based Fracture Patterns”. Continued to employment in industry – Google, Inc., Mountain View, CA.

Jorge Ivan Munoz, MS, UCLA CS, December 2014; Project: “An Autonomous Motor-Based Biomechanical Model of a Salamander”. Continued to employment in industry – Bee Cave Games, Austin, TX.

Dhaval Kumar Suthar, MS, UCLA CS, December 2014; Project: “Simulating Ants: Behavior Modeling and Pheromone-Based Communication”. Continued to employment in industry – NVIDIA, Inc., Mountain View, CA.

Xiaolong Jiang, MS, UCLA CS, December 2014; Project: “Kinematic Modeling and Simulation for Human Reaching Behaviors”. Continued to employment in industry.

Andre J. Abrahamian, MS, UCLA CS, March 2014; Project: “Shallow Water Simulation for Swimming Creatures”. Continued to employment in industry – Blizzard Entertainment, Inc.

Jing Li, MS, UCLA EE, March 2014; Project: “Realistic Water and Complex Scene Rendering”. Continued to employment in industry – Google, Inc., Mountain View, CA.

Vanna Bushong, MS, UCLA CS, September 2013; Project: “Facial Feature Detection for Automatic Head Modeling”. Continued to employment in industry – ESPN, Inc.

Ming Gao, MS, UCLA CS, June 2013; Project: “FEM Simulation of 3D Deformable Solids and Collision Handling”. Continued to PhD program in CS, University of Wisconsin, Madison.

Xinli Cai, MS, UCLA CS, June 2013; Project: “The Development of VSIM: Triggering Embedded Resources and New Features for 3D Content Management”. Continued to employment in industry – Qualcomm, Inc.

Alexander J. Rickett, MS, UCLA CS, June 2013; Project: “Position Based Cloth Simulation”. Continued to graduate program in Media Arts—Design, UCLA.

Ali Gunes, MS, UCLA CS, March 2013; Project: “An Implementation of Separate Human Eye Blink Detection in Real Time Using Online Templates”. Continued to employment in industry – Cisco Systems, Inc.

Kevin D. Broom, MS, UCLA CS, March 2013; Project: “Real-Time Two-Dimensional Fluid Dynamics Using the CPU”. Continued to employment in industry – Apple, Inc.

Matthew Wang, MS, UCLA CS, December 2012; Project: “Vision Evolution: Adapting Body and Brain in a Competitive Virtual Environment”. Continued to PhD Program, UCLA CS.

Konstantinos Sideris, UCLA CS, December 2012; Project: “Parallelized Incomplete Poisson Pre-conditioned Cloth Simulation”. Continued to PhD Program, UCLA CS.

Alexander Lee, MS, UCLA CS, December 2012; Project: “Shopping Mall Site Plan Generation Using Simulated Annealing”. Continued to found HugeIQ, Inc.

Jason Au, MS, UCLA CS, September 2012; Project: “An L-System Evolutionary Algorithm For Motion Synthesis”. Continued to employment in industry.

Damian Ancukiewicz, MS, UCLA CS, June 2012; Project: “GPU Implementation of an Exemplar-Based Image Inpainting Algorithm”. Continued to co-found Ember, Inc.

Joyce Y. Kuo, MS, UCLA CS, June 2012; Project: “Making a Splash: Rendering Realistic Water Splashes in a Swimming Pool”. Continued to employment in industry.

Miri Kim, MS, UCLA CS, June 2012; Project: “Generating Door Opening and Entering Motions for Virtual Humans”. Continued to employment in industry – Samsung SDS, Seoul, Korea.

Palash Agrawal, MS, UCLA CS, March 2012; Project: “Internet Services for Collaborative Data Sharing (ISCDS)”. Continued to employment in industry – Yahoo! Inc., Sunnyvale, CA.

Wilson Yan, MS, UCLA CS, March 2012; Thesis: “Biomechanical Simulation of the Human Hand and Forearm”. Continued to employment in industry – FATHOM, Inc., Oakland, CA.

Chenfanfu Jiang, MS, UCLA CS, February 2012; Project: “Simulation of Elastic Solids with Efficient Self-Collision Handling”. Continued to PhD program in CS, UCLA.

Ankit Arora, MS, UCLA CS, September 2011; Thesis: “Data-Driven Locomotion of Virtual Humans in the Unity Game Development Tool”. Continued to employment in industry – Wistlers World Studios, Little Wing World, LLC., Santa Monica, CA

Jasleen Singh, MS, UCLA CS, September 2011; Thesis: “A Framework for Non-Photorealistic 2D Animation”. Continued to employment in industry – Facebook, Inc., Menlo Park, CA.

Kok Chue (Michael) Au-Yeung, MS, UCLA CS, September 2011; Project: “Real-Time Photometric Stereo Using a Computer Screen”. Continued to employment in industry – Primitus, Ltd., Hong Kong.

Xiao (David) Lei, MS, UCLA CS, March 2011; Project: “Multi-Layer Construction of KD-Trees for Dynamic Ray Tracing”. Continued to employment in industry – Intel Inc., Santa Clara, CA.

Gautam Prasad, MS, UCLA CS, June 2010; Thesis: “Segmentation of Brain 3D MR Images Using a PCA Atlas and Nonrigid Registration”. Continued to PhD program in CS, UCLA.

Kresimir Petrinc, MS, UCLA CS, June 2010; Project: “Ultrasound Trainer: Data Acquisition, Volume Reconstruction, Simulation and Visualization”. Continued to PhD Program, UCLA CS

Thomas Moshe Wolfley, MS, UCLA CS, February 2010; Thesis: “Genetic Programming for Image Compression”. Continued to employment in industry – Meteor Games, Inc., Beverly Hills, CA.

Kang Won Lee, MS, UCLA CS, December 2009; Project: “The Simulation of Swarm Behavior in Ant Colonies”. Continued to employment in industry.

Chih-Ying (Michelle) Fang, MS, UCLA CS, June 2009; Project: “Playing Animation under Time and Space Constraints in a Virtual World”. Continued to employment in industry – Cisco Systems, Inc.

Sean Thompson, MS, UofT CS, October 2002; (NSERC Postgraduate Scholar) Thesis: “Interactive image-source techniques for virtual acoustics”. Continued to employment in industry – Electronic Arts, Vancouver, BC.

Howard Zhang, MS, UofT CS, October 2002; Thesis: “Physics-based muscle effects for real-time character animation”. Continued to employment in industry – Haptik, Inc., Santa Cruz, CA.

Grigore Pintilie, MS, UofT CS, October 2001; (NSERC Postgraduate Scholar) Thesis: “Interactive cutting of surface meshes for computer-aided surgical planning”. Continued to PhD program in EECS, MIT.

Stewart Andrews, MS, UofT CS, January 2000; Thesis: “Interactive generation of feature curves on surfaces: A minimal path approach”. Continued to PhD program in CS, Brown University.

Faisal Qureshi, MS, UofT CS, January 2000; Thesis: “Constructing anatomically accurate face models using computed tomography and cyberware data”. Continued to PhD program in CS, UofT.

Qinxin Yu, MS, UofT CS, April 1998; (NSERC Postgraduate Scholar) Thesis: “Synthetic motion capture for real-time virtual worlds”. Continued to PhD program in CS, UofT.

Petros Faloutsos, MS, UofT CS, January 1995; Thesis: “Physics-based animation and control of flexible characters”. (Co-supervisor: M. van de Panne) Continued to PhD program in CS, UofT.

Radek Grzeszczuk, MS, UofT CS, January 1994; Thesis: “Automatic learning of muscle-based locomotion through control abstraction”. Continued to PhD program in CS, UofT.

Yuencheng Lee, MS, UofT CS, October 1993; Thesis: “Construction and animation of functional facial models from range/reflectance data”. Continued to PhD program in CS, UofT.

M. Alex O. Vasilescu, MS & BS, MIT EECS, May 1993; Thesis: “Dynamic adaptive meshes for visual reconstruction”. (Co-supervisor: W.E.L. Grimson) Continued to PhD program in CS, UofT.

Timothy J. McInerney, MS, UofT CS, September 1992; (NSERC Postgraduate Scholar) Thesis: “Finite element techniques for fitting deformable models to 3D data”. Continued to PhD program in CS, UofT.

#### **Bachelor Students Graduated:**

Emily Whiting, BAsC, UofT Engineering Science, June 2004; Thesis: “Realism in 3D virtual spaces: Improving texture quality in image-based modeling systems through application of high dynamic range imagery”. Continued to PhD program, MIT Architecture Dept.

Desmond Rivet, BAsC, UofT Engineering Science, April 2001; Thesis: “Human animats and active vision systems in realistic 3D virtual worlds”. Continued to employment in industry – Schlumberger, Inc.

Daniel Horner, BAsC, UofT Engineering Science, April 1998; Thesis: “A practical framework for the extraction and visualization of slices from volumetric data”. Continued to employment in industry.

Charlton Wang, BAsC, UofT Engineering Science, April 1998; Thesis: “Implementation of the live wire technique for the segmentation of medical images”. Continued to employment in industry – AMD, Inc., Toronto, ON.

Kristin Hofstee, BAsC, UofT Engineering Science, April 1997; Thesis: “Simulation of diffusion in 3D virtual worlds”. Continued to graduate studies ECE Dept., UofT.

Oliver Bengtsson, BAsC, UofT Engineering Science, April 1995; Thesis: “Computational biological model of the physiology and behavior of aquatic animals”. Continued to employment in industry – Bell Sygma, Inc.

#### **Graduate Student Mentorship:**

Marco Rucci, Rotary Foundation Academic-Year Ambassadorial Scholar and visiting PhD student in Mathematics from University of Bologna, 09/10–06/11.

Masaki Nakada, Rotary Foundation Academic-Year Ambassadorial Scholar and visiting master’s student in Applied Physics from Waseda University, 09/09–06/10. Continued to master’s degree studies, Waseda University.

Akane Yano, visiting master’s degree student in Applied Physics from Waseda University, 07/07–10/07. Continued to master’s degree studies, Waseda University.

Hiroyuki Kubo, visiting master's degree student in Applied Physics from Waseda University, 06/06–10/06. Continued to master's degree studies, Waseda University.

Yongning Zhu, PhD student summer intern supported by VIGRE (Vertical Integration of Research and Education), Mathematics Department, UCLA, 06/06–08/06. Continued PhD studies, UCLA.

### **Undergraduate Student Mentorship:**

Jie Mei (Beijing Institute of Technology, China), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/18–09/18.

Wuyue Lu (University of Science and Technology, China), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/18–09/18.

Honglin Chen, UCLA Mathematics and Computer Science, 09/16–07/18.

Bokun Wang (University of Electronic Science and Technology, China), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/17–09/17.

Takuya Kato (Waseda University, Japan), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/14–09/14.

Carlos Sotelo, RISE-UP (Research Intensive Series in Engineering for Underrepresented Populations) Scholar, UCLA Center for Excellence in Engineering and Diversity (CEED), 06/12–08/12.

Wenjia Huang (Zhejiang University, China), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/08–09/08.

Ming Ji (Zhejiang University, China), UCLA Cross-Disciplinary Scholars in Science and Technology (CSST), 07/08–09/08.

Carlos Benito, RISE-UP (Research Intensive Series in Engineering for Underrepresented Populations) Scholar, UCLA Center for Excellence in Engineering and Diversity (CEED), 06/07–08/07.

### **High School Student Mentorship:**

Shivam Parikh, Mission San Jose High School, Fremont, CA, 06/2015–08/2015; Project: "Training Deep Neuromuscular Controllers". Continued to BS program, UC Berkeley, CS Department.

Tonislav Ivanov, Stuyvesant High School, New York, NY, 05/2002–06/2003; Project: "A Multilinear Model for Computerized Face Recognition and Image Processing," winner *Intel Foundation Achievement Award* at the *Intel International Science and Engineering Fair*, and other science fair awards. Continued to BS program, Cornell University, CS Department.

### **Students Currently Supervised:**

Ali Hatamizadeh, PhD, CS, in progress  
 Abdullah-Al-Zubaer Imran, PhD, CS, in progress  
 Alan Litteneker, PhD, CS, in progress  
 Garrett D. Ridge, PhD, CS, in progress  
 Tao Zhou, PhD, CS, in progress

Zhe Chen, MS, CS, in progress  
 Arnav Garg, MS, CS, in progress  
 Weichen Huang, MS, CS, in progress  
 Arjun Lakshminpathy, MS, CS, in progress  
 Zhengyuan Liu, MS, CS, in progress  
 Debleena Sengupta, MS, CS, in progress  
 Yajun Shi, MS, CS, in progress  
 William Varcho, MS, CS, in progress  
 Xiao Zeng, MS, CS, in progress



**Service on Thesis Committees:**

*Appendix E (Page 76) lists service on doctoral thesis committees in addition to those listed above.*

**Professional Activity****Consultancy Activities:**

Federal Trade Commission, Washington, DC, 2009.  
 Overland Entertainment Company, New York, NY, 2008.  
 IBM, Inc., Almaden Research Center, San Jose, CA, 2000–01.  
 Honda Research Institute, Inc., Mountain View, CA, 2000–02.  
 Intel Corporation, Microcomputer Research Labs, Santa Clara, CA, 1997–98.  
 Digital Equipment Corporation, Cambridge Research Laboratory, Cambridge, MA, 1990–97.  
 NEC Research Institute, Inc., Princeton, NJ, 1994.  
 Ontario Hydro, Toronto, ON, 1991–95.  
 Schlumberger Laboratory for Computer Science, Austin, TX, 1989–92.  
 Hughes Aircraft Co., El Segundo, CA, 1989.  
 Hughes Santa Barbara Research Center, Santa Barbara, CA, 1989.  
 Ascent Technology, Inc., Cambridge, MA, 1986.  
 Institute for Graphic Communication, Inc., Boston, MA, 1984–85.

**Advisory Boards:**

Chair of the External Evaluation Committee, Department of Informatics, University of Piraeus, Greece, 2011.

External Expert, Hellenic Quality Assurance and Accreditation (HQAA) Agency for Higher Education, Greece, 2010–.

Member of the Presidential Scientific Advisory Board, Max Plank Institute for Informatics, Saarbrücken, Germany, 2000–2014.

Member of the Audit Committee, School of Computer and Communication Sciences, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, 2007.

Executive of the Steering Committee, ACM SIGGRAPH / Eurographics Symposium on Computer Animation, 2006–07.

Founding Member of the Steering Committee, ACM SIGGRAPH / Eurographics Symposium on Computer Animation, 2001–2009.

Member of the Steering Committee of the EUROGRAPHICS Working Group on Animation and Simulation, 2000–02.

Member of the International Advisory Board, “Illustrated Dictionary of Computer Vision,” R. Fisher, K. Dawson-Howe, A. Fitzgibbon, C. Robertson, E. Trucco (eds.), Wiley, New York, 2005.

**Prize Selection Committees:**

Invited to join the Selection Panel, Paul and Daisy Soros Fellowships for New Americans, 2018 (declined).

Member of the IEEE Computer Society Fellows Evaluation Committee, 2018.

Member of the IEEE PAMI Computer Vision Awards Selection Committee (Lifetime Achievement Award and Distinguished Researcher Award), 2017.

Member of the IEEE Computer Society Fellows Evaluation Committee, 2017.

Member of the IEEE Computer Society Fellows Evaluation Committee, 2016.

Advisor to the John Simon Guggenheim Memorial Foundation Fellowship competition, 2016.

Member of the IEEE PAMI Computer Vision Awards Selection Committee (Lifetime Achievement Award and Distinguished Researcher Award), 2015.

Member of the IEEE Computer Society Fellows Evaluation Committee, 2015.

Member of the IEEE Computer Society Fellows Evaluation Committee, 2014.

Member of the IEEE PAMI Computer Vision Awards Selection Committee (Lifetime Achievement Award and Distinguished Researcher Award), 2013.

Member of the Applied Sciences and Engineering Division Committee for the Selection of New Fellows, Royal Society of Canada, 2012.

Chair of the IEEE Computer Vision Distinguished Researcher Award Nomination and Selection Committees, 2009.

Member of the Longuet-Higgins Prize Selection Committee, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2008.

Member of the Marr Prize Selection Committee, International Conference on Computer Vision (ICCV), 2007.

Invited to join the IEEE Computer Society Fellows Evaluation Committee, 2007 (declined), 2009 (declined).

Member of the Prize Papers Award Committee, ACM SIGGRAPH/EG Symposium on Computer Animation, 2006.

Member of the Guenther Enderle Best Papers and Best Student Papers Award Committee, EUROGRAPHICS '03 Conference, 2003.

Chair, Janet Fabri Memorial Prize Committee, New York University, Computer Science Department, 2002.

Member of the Guenther Enderle Best Paper Award Committee, EUROGRAPHICS '95 Conference, 1995.

#### **Funding Agency Advisory/Review Committees:**

Nominator, MacArthur Fellows Program, John D. and Catherine T. MacArthur Foundation, Chicago, IL, 2016.

Member of the College of Reviewers, Canada Research Chairs Program, Ottawa, Canada, 2005–.

Member of the Scientific Site Review Committee, Science Foundation Ireland, 2013.

Member of the IIS Review Panel, National Science Foundation (NSF), 2009.

Member of the Scientific Site Review Committee, Science Foundation Ireland, 2009.

Member of the “NSERC Circle” Research Strategy Advisory Board, Natural Sciences and Engineering Research Council of Canada, Ottawa, 2001–06.

Member of the Engineering Research Center (ERC) Program Review Panel, National Science Foundation (NSF), 2005.

Evaluator, MacArthur Fellows Program, John D. and Catherine T. MacArthur Foundation, Chicago, IL, 2004.

Member, Presidential Ad-Hoc Advisory Committee for the Faculty of Arts and Sciences, Harvard University, Cambridge, MA, 2003.

Member of the Faculty Early Career Development (CAREER) Review Panel in Graphics and Symbolic Geometric Computation, National Science Foundation (NSF), 2002.

Member of the ACR Grant Review Panel in Visualization, National Science Foundation (NSF), 2002.

Member of the Special Emphasis Panel (ZRG-1), National Institutes of Health (NIH), Center for Scientific Review, 2001.

Member of the Engineering Research Center (ERC) Program Review Committee, National Science Foundation (NSF), 2000.

Member of ITR Grant Review Panel in Human-Computer Interaction, National Science Foundation (NSF), 2000.

Member of ITR Grant Review Panel in Computer Vision/Graphics, National Science Foundation (NSF), 2000.

Member of the Engineering Research Center (ERC) Program Review Committee, National Science Foundation (NSF), 1999.

Member of the Faculty Early Career Development (CAREER) Review Panel in Computer Vision, National Science Foundation (NSF), 1999.

Member of Grant Review Panel in Computer Vision, National Science Foundation (NSF), 1996.

Member of the Diagnostic Imaging Study Section (DMG-1), National Institutes of Health (NIH), Division of Research Grants, 1995.

Member of the Research and Development for Image Understanding Systems (RADIUS) Advisory Committee, Defense Advanced Research Projects Agency (DARPA), 1994–1996.

Invited to join the Natural Sciences and Engineering Research Council of Canada (NSERC), Information Science Grant Selection Committee, 1993 (declined).

Member of the Artificial Intelligence Area Committee, Information Technology Research Center (ITRC), Ontario, 1990–94.

#### **Journal and Book Series Editorial and Advisory Boards:**

Advisory Board (founding member), *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*, Taylor and Francis Group, 2012 to present.

Editorial Board Member and Series Editor, *Lecture Notes in Computer Science*, Springer-Verlag, 2004 to present.

Member of the Advisory Committee of the book series *Lecture Notes in Computational Vision and Biomechanics*, Springer-Verlag, 2010 to 2013.

Associate Editor (founding member), *SIAM Journal on Imaging Sciences*, Society of Industrial and Applied Mathematics, 2007 to 2010.

Editorial Board (founding member) *Applied Mathematics Research eXpress (AMRX)*, Oxford University Press, 2004 to 2009.

Executive Committee and Editorial Board (founding member), *Medical Image Analysis*, Oxford University Press, 1996 to 2009.

Editorial Board (founding member), *Computer Animation and Virtual Worlds*, John Wiley & Sons, 2004 to 2009.

Editorial Board (founding member), *The Journal of Visualization and Computer Animation*, John Wiley & Sons, 1990 to 2003.

Editorial Board (founding member), *Graphical Models*, Academic Press, 1989 to 2003.

Editorial Advisory Board (founding member) *Videre: Journal of Computer Vision Research*, MIT Press, 1996 to 2000.

Invited in 2016 to join the Editorial Board of the *International Journal of Culture and Technology* (declined).

Invited in 2014 to join the Editorial Board of the *American Journal of Engineering and Applied Sciences* (declined).

Invited in 2014 to join the Editorial Board of the *Journal of Imaging* (declined).

Invited in 2011 to join the Editorial Board of the *International Journal of Communications, Network and System Sciences* (declined).

Invited in 2011 to join the Editorial Board of the *International Journal of Multimedia Technology* (declined).

Invited in 1993 to serve as Associate Editor of the *IEEE Transactions on Pattern Analysis and Machine Intelligence*, starting January 1994 (declined).

### **Conference Organization:**

Co-Organizer, Critical Archaeological Gaming Workshop, UCLA Cotsen Institute of Archaeology, Los Angeles, January 2018.

Member of the Technical Advisory Board, 2018 Conference on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2018), Lisbon, Portugal, March 2018.

General Co-Chair, 2017 Intelligence in Medicine Summit (IMS 2017), Stanford, CA, August 2017.

Member of the Technical Advisory Board, 2015 Conference on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2015), Montreal, Canada, September 2015.

Member of the Technical Papers Advisory Board, ACM SIGGRAPH Asia 2014 Conference, Shenzhen, China, December 2014.

Program Advisor, IEEE International Conference on Multimedia & Expo (ICME), San Jose, CA, July 2013.

Advisory Committee, 2nd IEEE Workshop on Camera Networks and Wide Area Scene Analysis (WCNWASA 2012), Providence, RI, June 2012.

Co-Organizer, First IEEE Workshop on Camera Networks (WCN10), 23rd IEEE Conference on Computer Vision and Pattern Recognition (CVPR'10), San Francisco, CA, June 2010.

Co-Organizer, Special Track on “Deformable Models: Theory and Applications”, 5th International Symposium on Visual Computing (ISVC'09), Las Vegas, NV, November 2009.

Co-Organizer, Workshop on Distributed Camera Networks: Research Challenges and Future Directions, Riverside, CA, May 2009.

Area Chair, Eleventh International Conference on Computer Vision (ICCV'07), Rio de Janeiro, Brazil, October 2007.

Conference CoChair, Fourth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'05), Los Angeles, CA, August 2005.

Program CoChair, Pacific Graphics Conference (PG'04), Seoul, Korea, October 2004.

Co-Organizer, ACM SIGGRAPH 04 Course on “Facial Modeling and Animation,” Los Angeles, CA, July 2004.

Organizer, First NYU Workshop on Computational and Biological Learning, New York, NY, January 2004.

Member of the Organizing Committee, 2nd IEEE Workshop on Geometric, Variational and Level Set Methods in Computer Vision, Nice, October 2003.

Member of the Organizing Committee, Workshop on Image Processing and Computer Vision, Fields Institute, Toronto, ON, 2002.

Member of the Steering Committee and Member of the Program Committee, First International Workshop on Entertainment Computing (IWEC 2002), Makuhari, Chiba, Japan, May 2002.

Technical Sketches Chair, IEEE Computer Vision and Pattern Recognition Conference (CVPR 01), Kauai, HI, December 2001.

Member of the Organizing Committee, Avatars98 and Avatars99 Conferences, Cyberspace, November 1998, December 1999.

Member of the Organizing Committee, Conference on Lifelike Computer Characters '98, Snowbird, UT, October 1998.

Organizer, ACM SIGGRAPH 98 Course on "Artificial Life for Graphics, Animation, Multimedia, and Virtual Reality," Orlando, FL, July 1998.

Organizer, Panel on "Behavioral Modeling and Animation: Past, Present, and Future," ACM SIGGRAPH 98, Orlando, FL, July 1998. Panelists: K. Joshi, K. Perlin, C. Reynolds, T. Simpson, X. Tu.

Program CoChair, IEEE Computer Vision and Pattern Recognition Conference (CVPR 98), Santa Barbara, CA, June 1998.

Program CoChair and Session Chair, IEEE Workshop on Biomedical Image Analysis, Santa Barbara, CA, June 1998.

Member of Scientific Board, IEEE Model-Based 3D Image Analysis Workshop (MB3IA), Bombay, India, January 1998.

Organizer, Panel on "Facial Animation: Past, Present, and Future," ACM SIGGRAPH 97, Los Angeles, CA, August 1997. Panelists: F. Parke, K. Waters, D. Sweetland, M. Cohen.

Organizer, ACM SIGGRAPH 97 Course on "Artificial Life for Graphics, Animation, Multimedia, and Virtual Reality," Los Angeles, CA, August 1997.

Member of Organizing Committee, Conference on Lifelike Computer Characters '96, Snowbird, UT, October 1996.

Organizer, ACM SIGGRAPH 96 Course on "Artificial Life for Graphics, Animation, Multimedia, and Virtual Reality," New Orleans, LA, August 1996.

Member of Organizing Committee, Conference on Lifelike Computer Characters '95, Snowbird, UT, October 1995.

Chair, 6th EUROGRAPHICS Workshop on Animation and Simulation, Maastricht, The Netherlands, August 1995.

Organizer, ACM SIGGRAPH 95 Course on "Artificial Life for Graphics, Animation, and Virtual Reality," Los Angeles, CA, August 1995.

Program Chair, IEEE Workshop on Physics-Based Modeling in Computer Vision, Cambridge, MA, June 1995.

Member of Organizing Committee, First EUROGRAPHICS International Workshop on Implicit Surfaces, Grenoble, France, April 1995.

Member of Organizing Committee, Conference on Lifelike Computer Characters '94, Snowbird, UT, October 1994.

CoChair, Workshop on Active Vision, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, Cambridge, UK, July 1993.

CoChair, SPIE/SPSE Conference on Biomedical Image Processing IV and Biomedical Visualization, San Jose, CA, January 1993.

CoChair, SPIE Conference on Geometric Methods in Computer Vision, San Diego, CA, July 1993.

CoChair, SPIE Conference on Geometric Methods in Computer Vision, San Diego, CA, July 1991.

CoChair, Modeling and Representation Group, NSF Workshop on Challenges in Computer Vision Research: Future Directions of Research, Lahaina, HI, June 1991.

Member of Organizing Committee, SPIE/SPSC Conference on Curves and Surfaces in Computer Vision and Graphics, Santa Clara, CA, February 1990.

Member of Organizing Committee, IMPA Workshop on Geometric Modeling, Rio de Janeiro, Brazil, January 1991.

Chair, Panel on “Physically-Based Modeling: Past, Present, and Future,” ACM SIGGRAPH 89, Boston, MA, August 1989. Panelists: A. Barr, J. Blinn, A. Witkin, D. Zeltzer. Abstract in *Computer Graphics*, **23**, 3, July 1989, 390. Edited transcription in *Computer Graphics*, **23**, 5, December, 1989, 191–209.

#### **Conference Program Committees:**

*Served as program committee member for all the major conferences in computer vision, computer graphics, and artificial intelligence, as well as conferences in medical image analysis, computer-aided design, multimedia, virtual reality, genetic computation, etc. Appendix F (Page 84) lists service on (more than 200) program committees.*

#### **Refereeing:**

*Appendix G (Page 93) lists refereeing activity.*

#### **Exhibitions**

“Artificial Animals,” with X. Tu, at *SYNWORLD - playwork:hyperspace*, Vienna, Austria, May 1999.

“Artificial Fishes,” video publicly displayed in the “Art & Aesthetics of Artificial Life” exhibition, *UCLA Center for Digital Arts*, Los Angeles, CA, July 1998.

“Better Face Communication,” with S. Morishima *et al.*, at *ACM SIGGRAPH 95 Interactive Communities*, Los Angeles, CA, August 1995.

“Go Fish!,” video publicly displayed in the “Vente” Exhibition Hall, Fujita, Corp., head offices, Tokyo, 1993-94.

“Teleconferencing with Personable Computers,” with K. Waters *et al.*, at *ACM SIGGRAPH 92 Showcase*, Chicago, IL, July 1992.

“Interactive Modeling and Visualization of Medical and Biological Data,” with I. Carlbom *et al.*, at *ACM SIGGRAPH 92 Showcase*, Chicago, IL, July 1992.

“Inelastic Models,” video publicly displayed from 09/90 to 12/90 at “Beaubourg,” *National Museum of Modern Art*, Paris, France.

“Inelastic Models,” video publicly displayed from 09/88 as part of a permanent exhibition “L’Image Calculee” at the museum *La Cité des Sciences et de l’Industrie*, Paris, France

**Media Coverage****Broadcast Media:**

Featured in the *Discovery Channel* production “*Science on the Red Carpet*”, a one-hour special hosted by Dave Foley, which “goes to the 2006 Scientific and Technical Academy Awards as the Academy of Motion Picture Arts and Sciences gathers to honour the behind-the-scenes creative geniuses that make movies so memorable”, premier broadcast on 02/27/06.

Featured in the production “Artificial Intelligence” in the 8-part documentary series *Beyond Invention* “about the scientists who search for truth beyond normal boundaries and shatter our illusions of reality”, produced by Mystique Films and Gryphon Productions for the *Discovery Channel*, premier broadcast 03/04.

Appearance on NY1 News TV Station, New York City, in the *Technology* story “NYU Tech Lab may be Able to Help With Homeland Security”, by Adam Balkin, 06/17/02.

Interviewed live on WHK 1220 AM, Cleveland, OH, in the show “Power Talk” with Carey Coleman, broadcast on 5/15/02.

Appearance on Tech TV (NYC) on 3/12/02 in the show *TechLive*; interviewed by Jessica Rappaport.

Appearance on the Discovery Channel on 3/2/97 in the documentary *Minds, Machines & Mystery* in the series *Techno TV*.

Appearance on the Discovery Channel on 1/19/96 in the program @*discovery.ca*.

Appearance on RAI, Italian Radio TV System, on 5/27/96 in the series *Superquark*.

Appearance on the Fuji Television Network (Japan) on 2/4/95 in the program *Revolution 8* (Episode #14 “Artificial Life”) (in Japanese).

Appearance on Television Espanola, the main Spanish TV station, in the program *Metropolis*, September 1995.

Appearance on the NHK Television Network (Japan) on 4/17/95 in the program *The Technology of the 20th Century* (premiere program) (in Japanese).

Appearance on the CBC Television Network (Canada) on 1/15/95 in the program *Découverte* (in French);

**Print and WWW Media:**

Published research featured in *New Scientist*, Issue 3050, December 5, 2015, in the In Brief story “Blood Gushes From Virtual Leg Injury to Help Train Combat Medics”, by Jacob Aron; initially published on the New Scientist website on November 27, 2015. Variants of the story appeared in *Popular Science*, November 30, 2015, “Here’s a Model of Exactly How a Leg Bleeds Once It’s Been Shot: Simulated Gore to Help Emergency Medicine”, by Alexandra Ossola (reprinted on the *Tech Insider* blog); *GIZMODO*, November 28, 2015, in the story “Simulation of a Leg Gushing Blood is as Gross as You’d Expect”, by Maddie Stone; *Medical Daily*, November 29, 2015, “Virtual Simulation of Leg Gushing Blood May Better Prepare Combat Medics to Handle The Real Thing”, by Ed Cara; *Digital Trends*, November 30, 2015, “This Bleeding Virtual Leg May Help Train Combat Medics to Perform Better In the Field”, by Lulu Chang (reprinted in *Yahoo! Finance*, *Yahoo! Lifestyle*, *UK & Ireland*); *TweakTown*, November 30, 2015, “University of California Develops Valuable Injury Training Simulation”, by Chris Smith; *EMS1.com*, November 30, 2015, “3-D Video Simulates Severe Bleeding For Combat Medics’ Training”, by EMS1 Staff; *Motherboard*, December 1, 2015, “This Simulated Injury Spurts Blood for Science”, by Emiko Jozuka, etc.

Featured and quoted in the story “Computer Science Professor Terzopoulos Named a Royal Academy Fellow” by Bill Kisliuk, UCLA Engineering Newsroom, May 1, 2014. Also in “Terzopoulos Named a Royal Academy Fellow” in *UCLA Engineer*, Fall 2014, Issue No. 32, pg. 21.

Published research featured in the story “The Mathematics of Interior Design”, in the UCLA Department of Mathematics Newsletter, *The Common Denominator*, Fall 2011 Issue, pg 5.

Published research featured in *New Scientist*, Issue 2809, April 20, 2011, in the Technology News story “Rearranging the Furniture? Let Software Do It For You”, by Paul Marks, pg 23. Reprinted on TMCnet.com, 04/23/11. Reported by *UCLA Newsroom* “In the News” 04/22/11 under the headline “Feng Shui 2.0”. Reported by the *South China Morning Post*, in the story “Computer Program Lets Users Click Into Interior Design Mode”, by Maggie Tam, May 9, 2011; *Oriental Daily* in the story “Make it Home In 33 Seconds”, Reported by Shao-Kuen Lam, May 9, 2011; *Apple Daily*, in the story “Scientists Invented Automatic Furniture Arrangement Software”, by Chi-Wing Mak, May 9, 2011; *Sing Tao Daily*, in the story “Furniture Arrangement Software Makes Ideal Home in 20 Seconds”, by Oi-Fong Tsang, May 9, 2011; *Ta Kung Pao*, in the story “Automatic Furniture Arrangement Software 60 Times Faster Than Human Design”, by Ta-Kung Pao, May 9, 2011; *Wen Wei Pao*, in the story “Interior Design Software draws Furniture Layout Plan in 20 Seconds”, by Chi-Man Pang, May 9, 2011;

Featured and quoted in *UCLA Engineer*, Fall 2009, Issue 22, in the cover story “Realistic Human Simulation”, by Matthew Chin, pg 6–7.

Featured and quoted in *The Economist*, March 7, 2009, issue in the “Technology Quaterly” story “Crowd Modelling: Model Behaviour”, by Duncan Graham-Rowe, March 5, 2009. The story was highlighted in *UCLA Headlines*, March 6, 2009, in “In the News: Virtual Crowds Get Dose of Reality”.

Bio and photo published in the *WorldWide ElectroActive Polymers (Artificial Muscles) Newsletter*, Vol. 10, No. 2, December 2008.

Quoted in *Government Computer News*, July 2008, issue in the “Tech Reports” story “Facing a Challenge,” by Drew Robb, on facial recognition technologies.

Featured in *McGill News* magazine, Spring/Summer 2008, in the lead story “40 Ways McGill Minds Made History,” by D. McCabe, M. Reynolds, J. Martin, M. Haldane, for Academy Award winning work in computer animation. Other “McGill Minds” featured include Ernest Rutherford, David Hubel, and Wilder Penfield.

Featured and quoted in *Biomedical Computation Review* 4(1), Winter 07/08, in the lead story entitled “Life in Motion: Simulation from Particles to People” by Katharine Miller, pg 12–28.

Featured and quoted in *ZDNet Emerging Technology Trends*, December 26, 2007, in the story entitled “Autonomous Virtual Crowds” by Roland Piquepaille.

Featured and quoted in *Technology Review*, December 19, 2007, in the lead story entitled “Virtual Extras: Giving each member of a digital crowd its own personality could make animated mob scenes more realistic” by Duncan Graham-Rowe. The story was reposted by *UCLA Newsroom*, *C|NET News.com*, *ACM TechNews*, etc.

Quoted in *Millimeter Magazine*, March 1, 2006, in the story “Oscar’s New Clothes” by Ellen Wolff.

Featured and quoted in the University of Toronto’s *The Bulletin*, March 6, 2006, in the front-page story “Professor Wins Oscar” by Nicolle Wahl; also in *News@UofT*, March 6, 2006, in the story “Professor Wins Oscar: A new computer animation technique took Demetri Terzopoulos from the classroom to the Oscars” by Nicolle Wahl. Reprinted on canadian-universities.net.

Quoted in the *Seattle Times*, March 2, 2006, in story “Microsoft Researcher Honored as Computer-Graphics Pioneer”, by Sandi Doughton.

Quoted in *UCLA Today* 26(10), February 22, 2006, pg. 3, in story “He’s the Guru of Computer-Generated Movie Magic”, by Ajay Singh.

Quoted in *Wired News*, February 20, 2006, in story “Gizmos Trump Gowns at Nerd Oscars”, by Xenii Jardin.



Quoted in *The Daily Bruin*, Daily Newspaper of UCLA, February 1, 2006, in story “Professor Earns Oscar for Technical Achievement” by Julia Erlandson.

Quoted in *idea&s*, the University of Toronto Arts and Science Review Magazine, 2(1), Spring 2005, in the story “TensorFaces: Technology in an Age of Terrorism” by Diana Kuprel.

Quoted in the *New York Sun*, in story “Robots (Probably) Won’t Turn Against Humanity, Experts Say in Their Defense,” by Eric Wolff, July 14, 2004, pg. 7, National Section, (commentary coinciding with the release of the motion picture “I, Robot”).

Quoted in the *NYU Alumni Magazine*, New York University, in story “Life or Something Like It”, by Shonna Keogan, Spring 2004, pg 11, “Cutting-Edge Research” section.

Quoted in the *George Street Journal*, Brown University, in story “Scientists and Artists Partner to Create Virtual Petra,” by Mary Jo Curtis, February 27, 2003, Liberal Arts Section.

Quoted in *The Boston Globe*, in story “At MIT, They Can Put Words in Our Mouths”, by Gareth Cook, May 15, 2002, pg. A1, Metro/Region Section.

Quoted by the *Associated Press*, February 21, 2002, in a story entitled “Physics Helps Virtual Stunt Artists.” Variants of the story appeared in *USA Today*, *The New York Times*, *The Los Angeles Times*, *The San Jose Mercury News*, *The Philadelphia Inquirer*, *The Seattle Post Intelligencer*, *The Indianapolis Star*, *The Honolulu Advertiser*, *The Salt Lake Tribune*, *The Hartford Courant*, *The Daytona Beach News*, etc., and internationally in *The Canadian Press*, *Indonesia Business News*, *Ljund & Bild* (Sweden), etc., online in *Yahoo!*, *Wired News*, *The Rumour Machine*, etc. The story was also broadcast by *CNN*, *MSNBC*, *1010 WINS* (AM Radio, New York City), etc.

Quoted in *New Scientist*, January 17, 2002, in a story entitled “Virtual stunt artists take first tumbles” by Duncan Graham-Rowe. Variants of the story were featured by *Ananova*, *The Independent (UK)*, *The Arlington Institute*, *SignOnSanDiego.com*, *Bahrain Tribune Daily*, *Frontera Informatica*, *Deutsche Presse-Agentur*, *ROL* (Russia), *Gazeta Wyborcza Nauka* (leading Polish newspaper), etc.

Quoted in *Computer Graphics World*, 24(7), July 2001, in a story entitled “Walk this way” by Diana Phillips Mahoney. Also featured on *ZDNet*.

Quoted in *Business Week*, March 20, 2000, pg. 81, in a report entitled “These Creatures May Be Smarter than the Script” contributed by N. Gross in the “Developments to Watch” column.

Quoted in *The Bulletin* (University of Toronto), March 13, 2000, pg. 12, in a “Spotlight on Research” article entitled “Mythical Mermen, Giant Ground Sloths, What Next?” written by Janet Wong.

Quoted in *The Globe and Mail* (Toronto), March 2, 2000, in a piece entitled “It lives! It lives!” in the daily column “Social Studies” written by D. Norden.

Quoted and pictured in *Nikkei Computer Graphics*, vol 157, October 1999, in the article “Tokyo ACM SIGGRAPH Forum ’99”.

Quoted in *EE Times* week of July 26, 1998 in the article “Intel and Microsoft push the 3-D software envelope” by reporter A. Wolfe.

Quoted in *Computing Research News*, November 1997, in the article “Top Canadian computer scientists honored”.

Quoted in *The World and I*, 10(6), June 1995, pp. 222–229, in article “Fishes of the Silicon Sea,” by G. Levinson.

Quoted in *The UofT Varsity*, 115(24), Thursday, November 24, 1994 in the article “Something fishy in cyberspace” by reporter A. Lustig.

Quoted in the *The Daily Telegraph* (London, UK) Monday, August 22, 1994 in the news story “These fish...exist only in a computer” by science editor R. Highfield.

Quoted in *The Globe and Mail* (Toronto), **45**(155), Saturday, August 10, 1994, in the story “Virtual fish are the catch of the day” by science reporter S. Strauss.

Quoted in *Science News*, **146**(3), July 1994, pp. 37, in a “Science News of the Week” story “Simulated fish swim through virtual seas” by R. Lipkin.

Quoted in the *New Zealand Herald*, August 18, 1993, in the story “Heidi ahead of her field” by science reporter K. Townsend.

Quoted in *Computer Graphics World*, **16**(3), March 1993, in the article “Physical graphics” by B. Robertson.

Quoted in *Digital Today*, October 1992, in the story “Cambridge Research Lab balances research, profitability” by staff writer K. Nelson.

Quoted in *Computer Graphics World*, **14**(6), June 1991, in the article “Algorithmic Advancements” by P. Sorensen and G. Pfitzer.

Quoted in *Computer Graphics World*, **12**(4), April 1989, in the article “Physically based modeling” by B. Robertson.

Quoted in *Sonovision*, **17**(313), March 1988, in the article “Des Logiciels plus ‘intelligents’ ”.

## A Additional Professional Honors

See Page 8 for major professional honors, including keynote and plenary invitations.

Invited Panelist on the panel on “New AI Technology, New Business” at the *2018 Global AI+ New Business Summit*, Shanghai, China, June 2018.

Invited Panelist on the panel on “Is AI on Blockchain a New Unstoppable Form of Life?” at the *Blockchain Economic Forum*, San Francisco, CA, June 2018 (declined).

Invited Lecturer, *6th VISUM (VISION Understanding and Machine Intelligence) Summer School*, Porto, Portugal, July 6-13, 2018 (declined).

Invited Panelist at the *Critical Archaeological Gaming Workshop*, UCLA Cotsen Institute of Archaeology, Los Angeles, CA, January 2018.

Invited Speaker at the *2018 EmTech China Conference*, Beijing, China, January 2018 (declined).

Invited Participant at the *2017 National Academies Keck Futures Initiative (NAKFI) Conference on “Beyond Boundaries: 15 Years of Exploring Intersections in Science, Engineering, and Medicine”*, National Academies, Irvine, CA, November 2017.

Invited Panelist at the *SoCalBio Digital Health Summit* panel on “The Next Frontiers of the Internet of Medical Things”, USC, Los Angeles, CA, November 2017.

Invited Speaker, *9th Annual International Congress of Cardiology*, Singapore, November 2017 (declined).

Invited Speaker, *BIRS Geometry and Computation for Interactive Simulation Workshop*, Banff International Research Station, Oaxaca, Mexico, September 2017 (declined).

Invited Speaker *6th IEEE International Conference on Reliability, Infocom Technologies and Optimization (ICRITO'2017)*, Amity University, Uttar Pradesh, Noida, India, September 2017 (declined).

Invited Panelist at the *LA Hacks* panel on “Technology and Entertainment”, UCLA, Los Angeles, CA, April 2017.

Invited Speaker *8th Annual International Congress of Cardiology*, Xi’ An, China, December 2016 (declined).

Invited Speaker *BIT 4th Annual World Congress of Emerging InfoTech*, Shenzhen, China, April 2015 (declined).

Invited Distinguished Lecturer, *Microsoft Distinguished Research Lecture Series*, Microsoft Research, Cambridge, England, July 2014 (declined).

Invited Participant at the *Intel Workshop on Computing Applications Workloads in 2017*, Institute of the Future, Palo Alto, CA, January 2011.

Invited Participant at the *2010 National Academies Keck Futures Initiative (NAKFI) Conference on “Seeing the Future with Imaging Science”*, National Academies, Irvine, CA, November 2010.

Invited Participant at the *Microsoft Research Faculty Summit*, Redmond, WA, July 2009.

Invited Participant and Award Presenter at the *IBM PartnerWorld Beacon Awards*, Hollywood, CA, May 2008.

Invited Speaker, *Dagstuhl Seminar on Visual Computing: Convergence of Computer Graphics and Computer Vision*, Schloss Dagstuhl, Leibniz-Zentrum für Informatik, Dagstuhl, Germany, April 2007 (declined).

Invited Speaker, *Dagstuhl Seminar on Human Motion: Understanding, Modeling, Capture and Animation. 13th Workshop on Theoretical Foundations of Computer Vision*, Schloss Dagstuhl, Leibniz-Zentrum für Informatik, Dagstuhl, Germany, June 2006 (declined).

Invited Panelist at the *ACM SIGGRAPH Course on Digital Face Cloning*, Los Angeles, CA, July 2005.

Invited Participant at the *Dolphin Cognition Workshop*, Wildlife Conservation Society, New York, NY, February 2004.

Invited Participant at the *National Academies Planning Meeting on Fundamental Research Challenges in Computer Graphics*, Salt Lake City, Utah, December 2003.

Invited Participant at the *Microsoft Research Faculty Summit*, Redmond, WA, July 2003.

Invited Participant at the *NSERC HQP Workshop*, Toronto, ON, May 2002.

Invited Panelist on the panel on “Parametric vs Non-Parametric Methods” at the *IEEE Workshop on Variational and Level Set Methods in Computer Vision*, Vancouver, July 2001.

Invited Visiting Scientist at the *Institute for Mathematics and its Applications*, University of Minnesota, Minneapolis, MN, May, 2001.

Invited Participant at the *Workshop on Advanced Technologies for Distance Learning*, Fraunhofer Center for Research in Computer Graphics, Providence, RI, February 2001.

Invited Participant and Rapporteur at the *National Academies/NSF Workshop on Mathematical and Statistical Challenges from Computer Science*, The National Academies, Washington, DC, April 2000.

Invited participant at the *Symposium on Nonlinear Dynamics in Biology and Chemistry*, University of California at Davis, Davis, CA, September 1999.

Invited participant at the *Stanford-NASA Biocomputation Center Workshop on the Future of Biocomputation*, Stanford University Medical Center, Stanford, CA, June 1999.

Invited Panelist at the *Workshop on Interpretation of Visual Motion*, Santa Barbara, CA, June 1998.

Invited Panelist on the panel on “The future of nonrigid motion analysis” at the *IEEE Nonrigid and Articulated Motion Workshop*, San Juan, PR, June 1997.

Invited Participant at the *NSF Workshop on High Performance Computing and Health Care*, Washington, DC, December 1994.

Invited Participant at the *NSF/ARPA Workshop on 3D Object Representations in Computer Vision*, New York, NY, December 1994.

Invited Panelist on the panel on “Planning and Perception” at the *Second International Conference on AI Planning Systems*, Chicago, IL, June 1994.

Invited Speaker at the *International Workshop on Graphics and Robotics*, Schloss Dagstuhl, Germany, April 1993.

Invited Participant at the *NSF Workshop on Facial Expression Understanding*, Washington, DC, July 1992.

Invited Participant at the *NSF Workshop on Challenges in Computer Vision Research: Future Directions of Research*, Lahaina, HI, June 1991.

Invited Participant at the *Canadian Institute for Advanced Research All Programs Meeting (FOCUS I)*, Mont St. Marie, Quebec, Canada, October 1988.

Invited Visiting Scientist at the *Institute for Mathematics and its Applications*, University of Minnesota, Minneapolis, MN, August 10–14, 1987.

Invited Speaker at the *1987 Optical Society of America Topical Meeting on Machine Vision*, Incline Village, Nevada, March 1987.

Invited Participant at the *NSF Workshop on the Research and Development of a High Performance Architecture for Symbolic and Numeric Applications*, University of California, Berkeley, CA, February 1985.

Invited Panelist at the *David Marr Memorial Conference*, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, April 1983.

Invited Student Participant at the *IEEE Workshop on Computer Vision: Representation and Control*, Rindge, New Hampshire, August 1982.

## B Research Grants

61. May 2018, Unrestricted Gift (\$100,000) “Medical Image Analytics and Diagnostics”, VoxeCloud, Inc., Los Angeles, CA.
60. August 2017, Unrestricted Gift (\$10,000) “Deep Learning of Neuromuscular Control”, Adobe Systems, Inc., San Jose, CA.
59. July 2017, Unrestricted Gift (\$200,000) “Medical Image Analytics and Diagnostics”, VoxeCloud, Inc., Los Angeles, CA.
58. July 2016–Apr 2020, “Computer-Aided Diagnosis of Pulmonary Embolism”, 4-Year NIH R01 Grant (\$684,457) J. Liang (PI) (Arizona State University), et al., D. Terzopoulos (Consultant and Advisory Board Member), National Heart, Lung, and Blood Institute, National Institutes of Health (NIH), Award No: 1R01HL128785-01A1.
57. Jul 2015–Jun 2018, “Virtual Tissue Modeling for Realtime Surgical and Interventional Procedure Simulation,” 3-Year DoD Research Grant (\$3,600,000), P. Benharash (PI) (UCLA Surgery), S. Chandler (UCLA IBP), E.P. Dutton (UCLA Surgery), J.D. Eldredge (UCLA MAE), W.S. Grundfest (UCLA BioEng), W.S. Klug (UCLA MAE), A.P. Santhanam (UCLA RadOnc), J.M. Teran (UCLA Math), D. Terzopoulos, Department of Defense, Office of the Congressionally Directed Medical Research Programs (CDMRP), Army Medical Research Acquisition Activity, Award No: W81XWh-15-0147.
56. Apr 2013–Jul 2015, Unrestricted Gift (\$75,450), Biomedical Imaging Research Institute, Cedars-Sinai Medical Center, Los Angeles, CA.
55. Oct 2012–Dec 2017, “Ultrasound Training for the Military Health System,” Subcontract (\$230,325) D. Terzopoulos (PI), Department of Defense (DoD) Army / Pelagique, LLC, Santa Monica, CA.
54. Sep 2011–Aug 2012, “Realistic Human Simulation,” Okawa Research Grant (\$10,000), Okawa Foundation for Information and Telecommunications.
53. May 2011–Jun 2013, “A Multilinear (Tensor) Algebraic Framework for Multifactor Manifold Learning With Applications to Image Science,” 2-Year National Academies Keck Futures Initiative (NAKFI) Grant (\$100,000), D. Terzopoulos (PI), National Academies of Sciences.
52. Jan 2011–Sep 2012, Unrestricted Gift (\$106,412), Artificial Intelligence in Medicine (AIM) Program, Cedars-Sinai Medical Center, Los Angeles, CA.
51. Aug 2010–Oct 2012, “Multimedia Combat Injury Management Training”, Department of Defense (Army) research grant (\$424,462), E. Savitsky (PI) (UCLA Emergency Medicine), D. Terzopoulos.
50. Jul 2010–Jul 2012, “Identifying Complex Activities by Tracking Communication and Belief,” 2010 Intelligence Community Postdoctoral Research Fellowship Program grant (\$240,000), D. Terzopoulos (PI), Central Intelligence Agency (CIA).
49. Nov 2009–Jun 2013 “Recognition and Tracking in a Multiple Camera System,” 2-year Subcontract (\$160,000), M.A.O Vasilescu (PI), D. Terzopoulos (PI), University of California, Riverside.
48. Dec 2009–Dec 2011, “Recollect: Robust and Accurate Face Recognition in Real-Life Conditions,” 2-year Biometric Exploitation Science and Technology (BEST) Program research grant (\$1,781,953), I. Kakadiaris (PI) (U Houston), S. Shah (U Houston), M. Papadakis (U Houston), D. Terzopoulos, Intelligence Advanced Research Projects Activity (IARPA), Smart Collection Office.
47. Jul 2009–Jun 2015 “RI:Medium: Integrated Analysis and Synthesis for Data Mining in a Video Network,” 3-Year National Science Foundation (NSF) Information and Intelligent Systems (IIS) Research Grant (\$1,200,000), B. Bhanu (UCR) (PI), A. Roy-Chowdhury (UCR), D. Terzopoulos, NSF Award No: 0905671.
46. Jul 2009–Jun 2010, “Realistic Human Simulation for Art, Science, Engineering and Medicine,” 1-year Fellowship Grant (\$32,000), John Simon Guggenheim Memorial Foundation.

45. May 2008–Ongoing, CSD Industrial Affiliate Program (\$80,000), Blizzard Entertainment, Inc., Irvine, CA.
44. Mar 2008–Mar 2009, Unrestricted Gift (\$28,500), Rothman Foundation.
43. Oct 2007–Sep 2009, “ITR:Medium: Intelligent Deformable Models,” 2-Year National Science Foundation (NSF) Information Technology Research (ITR) Grant (\$696,472), D. Terzopoulos (PI) (UCLA), H. Qin (SUNY-SB), S. Osher (UCLA), R. Fedkiw (Stanford), NSF Award No: IIS-0830183.
42. Sep 2007–Oct 2012, “The Application of Novel Technologies in Computer-Mediated Medicine,” 3-year (+ 2-year extension) UCLA Center for Advanced Surgical and Interventional Technology (CASIT) Sub-Award (\$274,667), D. Terzopoulos (PI), Telemedicine and Advanced Technology Research Center (TATRC), U.S. Army Medical Research and Materiel Command (USAMRMC), US Army Medical Research Grant.
41. Dec 2005–Ongoing, Henry Samueli Fellow, Henry Samueli School of Engineering and Applied Science Discretionary Grant (\$375,000), UCLA.

### **At NYU**

40. Dec 2004–Nov 2007, “Energy Based Models for End-To-End Learning of Ground Vehicle Navigation,” 3-Year Grant (\$667,000), Y. LeCun (PI) (NYU), U.A. Muller (Net-Scale Technologies, Inc.), D. Terzopoulos, B. Flepp (Net-Scale), J. Ben (Net-Scale), Defense Advanced Research Projects Agency (DARPA).
39. Oct 2003–Jun 2008, “ITR:Medium: Intelligent Deformable Models,” 4-Year National Science Foundation (NSF) Information Technology Research (ITR) Grant (\$1,240,001), D. Terzopoulos (PI) (NYU), H. Qin (SUNY-SB), S. Osher (UCLA), R. Fedkiw (Stanford), NSF Award No: IIS-0326388.
38. Mar 2003–Sep 2004, “Multilinear Image Analysis for Face Detection,” 18-month Research Grant (\$464,532), Department of Defense Combating Terrorism Technology Support Program, Technical Support Working Group (TSWG), Award No: SC-AS-1649CAT.
37. Mar 2003–Nov 2003, “Computer Vision in Virtual Reality,” 8-month Seedling Grant (\$300,000), Defense Advanced Research Projects Agency (DARPA), Grant No: NBCH1030005.
36. Oct 2002–Sep 2006, “ITR: 3D Free Form Models for the Representation, Manipulation, and Recovery of Shape, with Applications to Archaeology and Virtual Sculpting,” 4-Year National Science Foundation (NSF) Information Technology Research (ITR) Grant (\$2,055,616), D. Cooper (PI) (Brown U), B. Kimia (Brown U), D. Mumford (Brown U), D. Terzopoulos (NYU), M. Jukowsky (Brown U), R. Fishman (Brown U), NSF Award No: 0205477.
35. Jul 2002–Jun 2004, “Development of an Anatomical and Histological Atlas of Normal and Transgenic Mice Using Micro MRI Techniques, Mathematical Segmentation and Histological Staining,” Howard Hughes Medical Institute Research Grant (\$100,000), Mount Sinai School of Medicine, Initiative in Computational Biomedicine and Advanced Imaging, C. Tang (PI) (MSSM), D. Terzopoulos, P. Hof (MSSM).

### **At UofT**

*The University of Toronto deducts no overhead charges or faculty salaries from government funding agency grants.*

34. Apr 2002–Mar 05, “Visual modeling,” 3-Year Individual Discovery Grant (\$300,000), Natural Sciences and Engineering Research Council of Canada (NSERC).
33. Oct 2000–Mar 02, “Remote Operation with Supervised Autonomy,” 1.5-Year Research Grant (\$727,867), with D. Parry, L. Gregoris (MD Robotics), G. Vukovich (Canadian Space Agency), A. Woodsworth (NRCC), PRE-CARN Technology Development Program in Intelligent Systems.

32. Apr 2000–Mar 02, “Advanced facial modeling for computer-aided simulation and planning of craniofacial surgical procedures,” 2-Year Research Grant (\$180,500), with T. McInerney, O. Antonyshyn (Sunnybrook Hospital), J.-O. Lachaud (U. Bordeaux) Communications and Information Technology Ontario (CITO), Ontario Centres of Excellence (OCE).
31. Apr 2000–Mar 02, “Input methods for 3D digital media,” 2-Year Research Grant (\$225,000), with E. Fiume, A. Hausner, M. van de Panne, J. Stewart, Communications and Information Technology Ontario (CITO), Ontario Centres of Excellence (OCE).
30. Apr 1999–Mar 00, “Artificial Mechanical Environment for Studies of Human Motor Control”, Major Equipment Grant (\$200,000), with D. Ostry (McGill), A. Feldman (Montreal), J. Flanagan (Queen’s), M. Levin (Montreal), K. Munhall (Queen’s), J. Ramsey (McGill), Natural Sciences and Engineering Research Council of Canada (NSERC).
29. Sep 1998–Aug 00, “Artificial animals”, Killam Distinguished Scientist Grant (\$138,500), Canada Council for the Arts.
28. Apr 1998–Mar 02, “Visual modeling,” 4-Year Research Grant (\$342,375), Natural Sciences and Engineering Research Council of Canada (NSERC).
27. Apr 1998, “Visual modeling engine,” Equipment Grant (\$107,561), Natural Sciences and Engineering Research Council of Canada (NSERC).
26. Jul 1998–Jun 00, “Advanced facial modeling for computer-aided simulation and planning of craniofacial surgical procedures,” 2-Year Research Grant (\$263,000), with T. McInerney, O. Antonyshyn (Sunnybrook Hospital), Communications and Information Technology Ontario (CITO), Ontario Centres of Excellence (OCE).
25. Jul 1998–Jun 00, “Interactive realistic computer graphics,” 2-Year Research Grant (\$350,000), with E. Fiume, M. van de Panne, K. Sevcik, J. Stewart, Communications and Information Technology Ontario (CITO), Ontario Centres of Excellence (OCE).
24. Jan 1997–Oct 97, Unrestricted Research Grant (3,000,000 yen), Advanced Telecommunications Research (ATR) Laboratories, Kyoto, Japan.
23. Apr 1996–Mar 98, “Artificial animals,” 2-Year Steacie Fellowship Supplement Grant (\$380,881), Natural Sciences and Engineering Research Council of Canada (NSERC).
22. Jul 1996–Jun 98, Steacie Distinguished Scientist Grant (\$222,564), Natural Sciences and Engineering Research Council of Canada (NSERC).
21. Apr 1996, “Replacement of workstations,” Equipment Grant, (\$114,860) with F. Fich & 18 others, Natural Sciences and Engineering Research Council of Canada (NSERC).
20. Oct 1995–Sep 98, “Physical Models of face and vocal tract motion,” 3-Year Collaborative Special Project Grant (\$312,500), with A. Feldman (Montreal), K. Munhall (Queen’s), D.J. Ostry (McGill), Natural Sciences and Engineering Research Council of Canada (NSERC).
19. Jul 1995–Jun 97, “Retinal Modeling for Ophthalmological Diagnostics and Education,” with P. Jasiobedzki, J. Stevens (Eye Institute of Canada), 2-Year Research Grant (\$252,645), Information Technology Research Center (ITRC), Ontario.
18. Jul 1995–Jun 97, “Accelerated realistic image synthesis for virtual environments,” with E. Fiume, M. van de Panne, J. Stewart, 2-Year Research Grant (\$331,250), Information Technology Research Center (ITRC), Ontario.
17. Dec 1994–Nov 97, “Model-based Object Recognition by Physics-Based Shape Recovery,” 3-Year Collaborative Project Grant (\$149,000), with S. Dickinson (Rutgers), D. Metaxas (UPenn), Natural Sciences and Engineering Research Council of Canada (NSERC).
16. Apr 1994–Mar 98, “Visual modeling,” 4-Year Research Grant (\$232,000), Natural Sciences and Engineering Research Council of Canada (NSERC).

15. Apr 1994, “Visual modeling engine,” Equipment Grant (\$139,252), Natural Sciences and Engineering Research Council of Canada (NSERC).
14. Apr 1994–Mar 97, “Computer science lab,” 3-Year Infrastructure Grant, (\$807,000) with K. Jackson & 50 others, Natural Sciences and Engineering Research Council of Canada (NSERC).
13. Apr 1993–Mar 95, “Ophthalmic image analysis using deformable models,” with J. Stevens (Eye Institute of Canada), P. Jasiobedzki, 2-Year Research Grant (\$220,000), Information Technology Research Center (ITRC), Ontario.
12. Apr 1993–Mar 95, “Modelling, rendering, and controlling complex motion and illumination in virtual graphical environments,” with E. Fiume, J. Stewart, 2-Year Research Grant (\$253,000), Information Technology Research Center (ITRC), Ontario.
11. Apr 1992, “Enhanced visual modeling facility,” Equipment Grant (\$51,044), Natural Sciences and Engineering Research Council of Canada (NSERC).
10. Apr 1991–Mar 93, “Smart snakes for the recognition of handwritten characters,” with G. Hinton, 2-Year Research Grant (\$218,000), Information Technology Research Center (ITRC), Ontario.
9. Apr 1991–Mar 93, “The modeling and rendering of visually complex phenomena,” with E. Fiume, J. Amanatides, A. Fournier, 2-Year Research Grant (\$225,000), Information Technology Research Center (ITRC), Ontario.
8. Apr 1991–Mar 94, “Visual modeling,” 3-Year Operating Grant (\$153,750), Natural Sciences and Engineering Research Council of Canada (NSERC).
7. Apr 1991–Dec 95, “ARK research” 4-Year Research Contract (\$56,000), Ontario Hydro Research Division, Toronto.
6. Apr 1991–Dec 95, “ARK: Autonomous robot for known environments,” with A. Jepson, J. Tsotsos, 4-Year Research Grant (\$534,400), PRECARN Associates, Inc.
5. Apr 1990, “Visual modeling workstation,” Equipment Grant (\$52,903), Natural Sciences and Engineering Research Council of Canada (NSERC).
4. Apr 1990–Mar 94, “Active vision for mobile robots,” with J. Tsotsos, A. Jepson, E. Miliotis (York), M. Jenkin (York), Institute for Robotics and Intelligent Systems (IRIS) 4-Year Research Grant (\$1,247,351), Intercouncil Program Directorate, Government of Canada.
3. Sep 1989–Aug 95, Distinguished Scientist Grant (\$501,641), Canadian Institute for Advanced Research (CIFAR).
2. Apr 1989–Mar 91, “Visual modeling,” 2-Year Operating Grant (\$76,000), Natural Sciences and Engineering Research Council of Canada (NSERC).

## Elsewhere

1. 1980–85, Contributor to several research grant proposals to the US Defense Advanced Research Projects Agency, the US Office of Naval Research, the US Defense Mapping Agency, and the System Development Foundation that yielded funding for computational vision research at the MIT Artificial Intelligence Laboratory.



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### Volumes

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- [2] *Distributed Video Sensor Networks*, B. Bhanu, C.V. Ravishankar, A.K. Roy-Chowdhury, H. Aghajan, D. Terzopoulos (eds.). Springer, New York, 2011, 485 pages. (ISBN 978-0-85729-126-4)
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- [5] *Real-Time Computer Vision*, C. Brown, D. Terzopoulos (eds.), Publications of the Newton Institute of Mathematical Sciences, Vol. 4, P. Goddard (ser. ed.), Cambridge University Press, Cambridge, UK, 1994, 248 pages. (ISBN 0-521-47278-4)

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- [12] “Artificial Life for Graphics, Animation, Multimedia, and Virtual Reality,” D. Terzopoulos (ed.), *ACM SIGGRAPH 98 Course Notes Vol. 22*, 1998.
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#### In Preparation:

- [16] “Artificial Life for Computer Graphics,” D. Terzopoulos, Morgan & Claypool, in preparation.

### Dissertations

- [1] “*Multiresolution Computation of Visible-Surface Representations*,” Ph.D. Dissertation, Dept. of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA, January 1984.
- [2] “*Applying Co-Occurrence Matrices to Texture Classification*,” M.Eng. Dissertation, Dept. of Electrical Engineering, McGill University, Montreal, Canada, April 1980.

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- [66] “Artificial animals with autonomous locomotion, perception, behavior, and learning,” (invited abstract), *Proc. Machines that Learn Workshop*, Snowbird, UT, April 1995.
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- [70] “Deformable models for biomedical data analysis,” *Proc. AAAI Spring Symposium Series: Applications of Computer Vision in Medical Image Processing*, Stanford, CA, March 1994, 118–121.
- [71] “Physics-based analysis $\leftrightarrow$ synthesis,” (invited paper) *Actes Journée INRIA Analyse/Synthèse D’Images*, INRIA, Rocquencourt, France, January 1994, 44–62.
- [72] “Model-based analysis/synthesis of facial image sequences,” (invited paper) *Proc. First International Workshop on Mobile Multimedia Communications (MoMuC-1)*, Tokyo, Japan, December 1993, B.1.10-1–6.
- [73] “NURBS with Lagrangian dynamics,” (abstract) with H. Qin, *Third SIAM Conference on Geometric Design*, Tempe, AZ, November 1993, A27.
- [74] “Physics-based modeling for image analysis and synthesis,” (invited paper) *Proc. First New Zealand Conference on Image and Vision Computing (IVCNZ’93)*, C. Bowman, et al. (eds), Industrial Research Ltd., Auckland, New Zealand, August 1993, 1–5.
- [75] “Recent techniques in human modeling, animation, and rendering,” with D. Thalmann, N. Badler, and N. Magnenat-Thalmann, *ACM SIGGRAPH 93 Course Notes Vol. 80*, August 1993.
- [76] “Design of ARK, a sensor-based mobile robot for industrial environments,” with S.B. Nickerson, et al., *Proc. of Intelligent Vehicles ’93 Symposium*, Tokyo, Japan, July 1993, 252–257.
- [77] “Curvature and continuity control in particle-based surface models,” with R. Szeliski, D. Tonnesen, *Geometric Methods in Computer Vision*, B.C. Vemuri (ed.), *Proc. SPIE 2031*, San Diego, CA, July 1993, 172–181.
- [78] “Computer-based facial expression models and image databases,” with F. Parke et al. in *Final Report to NSF of the Planning Workshop on Facial Expression Understanding*, P. Ekman, T.S. Huang, T.J. Sejnowski, and J.C. Hager (eds.), March 1993, 48–53.
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- [80] “A finite element based deformable model for 3D biomedical image segmentation,” with T. McInerney, *Biomedical Image Processing and Biomedical Visualization*, R.S. Acharya, D.B. Goldgof (eds.), *Proc. SPIE 1905*, San Jose, CA, January 1993, 254–269.
- [81] “Nonrigid multibody dynamics for model synthesis and estimation,” with D. Metaxas, *Proc. 3rd Panamerican Congress of Applied Mechanics (PACAM III)*, Sao Paulo, Brazil, January 1993, 455–458.
- [82] “Dynamic surfaces,” (invited paper) *Curves and Surfaces in Computer Vision and Graphics III*, J.D. Warren (ed.), *Proc. SPIE 1830*, Boston, MA, November 1992, 128–139. Reprinted in *Selected SPIE Papers on CD-ROM, Vol. 8: Mathematical Imaging and Vision*, G. Ritter (ed.), SPIE, 1999.
- [83] “Reconstruction and Visualization of a Human Embryo Heart,” (poster) W.M. Hsu, I. Carlbom, D. Terzopoulos, M. Doyle, *IEEE Visualization ’92*, Boston, MA, October 1992.
- [84] “Advanced techniques in human modeling, animation, and rendering,” with D. Thalmann, N. Badler, and N. Magnenat-Thalmann, *ACM SIGGRAPH 92 Course Notes Vol. 17*, July 1992.
- [85] “Kalman filter based estimation of shape and nonrigid motion,” (invited paper) with D. Metaxas, *Proc. Canadian Conference on Electrical and Computer Engineering (CCECE ’92)*, Toronto, ON, September 1992, MM5.4.1–4.
- [86] “Modeling and representation,” with R. Szeliski, and a position statement on computer vision in *Final Report of the NSF Workshop on the Challenges in Computer Vision Research: Future Directions of Research*, S. Negahdaripour, A. K. Jain (eds.), November 1991.

- [87] “A physically-based framework for nonrigid shape and motion estimation,” D. Metaxas, D. Terzopoulos, in *1991 IJCAI Workshop on Dynamic Scene Understanding (W-7) Paper Summaries*, Sydney, Australia, August 1991.
- [88] “Advanced techniques in human modeling, animation, and rendering,” with D. Thalmann, N. Badler, and N. Magnenat-Thalmann, *ACM SIGGRAPH 91 Course Notes Vol. 20*, August 1991.
- [89] “Physically-based and probabilistic models for computer vision,” with R. Szeliski, *Geometric Methods in Computer Vision*, B.C. Vemuri (ed.), Proc. SPIE 1570, San Diego, CA, July 1991, 140–152.
- [90] “Shape representation and nonrigid motion tracking using deformable superquadrics,” with D. Metaxas, *Geometric Methods in Computer Vision*, B.C. Vemuri (ed.), Proc. SPIE 1570, San Diego, CA, July 1991, 12–20.
- [91] “Applied deformable models,” (invited abstract) *Abstracts Book of the Second International Conference on Industrial and Applied Mathematics (ICIAM’91)*, Washington, DC, July 1991, 213.
- [92] “Adaptive surface reconstruction,” with M. Vasilescu, *Sensor Fusion III: 3-D Perception and Recognition*, P.S. Schenker (ed.), Proc. SPIE 1383, Boston, MA, 1990, 257–264.
- [93] “A physical model of facial tissue and muscle articulation,” and “Muscle parameter estimation from image sequences,” with K. Waters, in *State of the art in facial animation, ACM SIGGRAPH 90 Course Notes Vol. 26*, August 1990.
- [94] “3D reconstruction using deformable models,” (invited paper) *Sensing and Reconstruction of Three-Dimensional Objects and Scenes*, B. Girod (ed.), Proc. SPIE 1260, February 1990, 200–202.
- [95] “Deformable models and applications,” (invited abstract) *Minisymposium on Geometry and Computing about Physical Objects, Proc. SIAM Conference on Geometric Design*, Tempe, Arizona, November 1989, A40.
- [96] “Canonical parameters for invariant surface representation,” B.C. Vemuri, D. Terzopoulos, P.J. Lewicki, *Intelligent Robots and Computer Vision VIII: Algorithms and Techniques*, D. Casasent and E.L. Hall (eds.), Proc. SPIE 1192, November 1989, 75–86.
- [97] “Visual reconstruction for researchers,” a review of Blake and Zisserman’s *Visual Reconstruction*, MIT Press, 1987, with R. Szeliski, *Image and Vision Computing*, 7(4), November 1989, 308–309.
- [98] “Reprints of four physically-based modeling papers,” with A. Barr, A. Witkin, *et al.*, in *Topics in Physically-Based Modeling, ACM SIGGRAPH 89 Course Notes Vol. 30*, August 1989.
- [99] “Elastically deformable models,” with J. Platt *et al.*, in *Developments in Physically-Based Modeling, ACM SIGGRAPH 88 Course Notes Vol. 27*, August 1988.
- [100] “Symmetry-seeking elastic models in vision,” (abstract) with M. Kass and A. Witkin, *Proc. ARVO 1988, Investigative Ophthalmology and Visual Science, Vol. 29*, Sarasota, FL, May 1988, 409.
- [101] “Physically based modeling for vision and graphics,” (invited paper) with A. Witkin *et al.*, *Proc. DARPA Image Understanding Workshop*, Cambridge, MA, April 1988, 254–278.
- [102] “Shape, depth, and nonrigid motion from profiles,” (invited paper) D. Terzopoulos, A. Witkin, M. Kass, *Applications of Artificial Intelligence VI*, M.M. Trivedi (ed.), Proc. SPIE 937, April 1988, 245–253.
- [103] “Physical modeling for vision and graphics,” with A. Witkin *et al.*, *Proc. AAAI Spring Symposium Series: Physical and Biological Approaches to Computational Vision*, Stanford, CA, March 1988, 72–76.
- [104] “Topics in physically-based modeling,” with A. Barr, R. Barzel, D. Haumann, J. Platt, A. Witkin, *ACM SIGGRAPH 87 Course Notes Vol. 17*, August 1987.
- [105] “On matching deformable models to images,” (invited paper) *Topical Meeting on Machine Vision*, Technical Digest Series, Vol. 12 (Optical Society of America, Washington, DC) 1987, 160–163. Also Technical Report No. 60, Schlumberger Palo Alto Research, Palo Alto, CA, November 1986.
- [106] “Stereo matching as constrained optimization using scale continuation methods,” (invited paper) with A. Witkin and M. Kass, *Optical and Digital Pattern Recognition*, H-K. Liu and P.S. Schenker (eds.), Proc. SPIE 754, January 1987, 92–99.
- [107] “Concurrent multilevel relaxation,” *Proc. DARPA Image Understanding Workshop*, Miami Beach, FL, L.S. Baumann (ed.), December 1985, 156–162.
- [108] “Computing visible-surface representations,” AI Memo No. 800, MIT Artificial Intelligence Lab., Cambridge, MA, March 1985.
- [109] “Multigrid relaxation methods and the analysis of lightness, shading, and flow,” AI Memo No. 803, MIT Artificial Intelligence Lab., Cambridge, MA, October 1984.

- [110] “Controlled-smoothness stabilizers for the regularization of ill-posed visual problems involving discontinuities,” *Proc. DARPA Image Understanding Workshop*, New Orleans, LA L.S. Baumann (ed.), October 1984, 225–229.
- [111] “Multi-level reconstruction of visual surfaces: Variational principles and finite element representations,” AI Memo No. 671, MIT Artificial Intelligence Lab., Cambridge, MA, April 1982, 1–90.

## Creative Works: Selected Videos

- [1] “V0107: Numerical simulation of hemorrhage in human injury,” (computer animation, abstract) K. Chong, C. Jiang, A. Santhanam, D. Terzopoulos, P. Benharash, J. Teran, J.D. Eldredge, presented in *Gallery of Fluid Motion, 68th Annual Meeting of the American Physical Society Division of Fluid Dynamics*, Boston, MA, November 2015.
- [2] “DressUp!,” (computer animation) with L.-F. Yu, S.-K. Yeung; excerpt in *SIGGRAPH Asia 2012 Technical Papers Trailer*, November 2012.
- [3] “The jointrix: Spline joints,” (computer animation) with S.-H. Lee; excerpt “SIGGRAPH Joint” in *SIGGRAPH 2008 Papers Preview*, August 2008; screened at the SIBGRAPI 2008 Video Festival (Technical Category), Campo Grande, Brazil, October 2008.
- [4] “Autonomous pedestrians: (1) Animation of autonomous pedestrians in urban environments; (2) Following an autonomous pedestrian; (3) Autonomous pedestrians in the petra great temple”, (computer animation) with W. Shao, published on the *Technology Review* website ([www.technologyreview.com](http://www.technologyreview.com)), December 19, 2007, as multimedia accompaniment to a story entitled “Virtual Extras” by Duncan Graham-Rowe. Excerpts broadcast January 8, 2008 by the major Italian news organization *Repubblica* in a video story “Comparsa virtuali, ma intelligenti”, by Alessio Balbi, on *Repubblica TV Technè* ([tv.repubblica.it](http://tv.repubblica.it)).
- [5] “Heads up!,” (computer animation) with S.-H. Lee; excerpt in *SIGGRAPH 2006 Papers Preview*, June 2006; premier screening at the *ACM SIGGRAPH 06 Electronic Theater*, Boston, MA, August 2006; screened at the *Ars Electronica Animation Festival*, Linz, Austria, September 2007; screened at the SIBGRAPI 2008 Video Festival (Technical Category), Campo Grande, Brazil, October 2008.
- [6] “TensorTextures,” (computer animation) with M.A.O. Vasilescu, J. Silver; premier screening at the *NYC ACM SIGGRAPH Metropolitan College Animation Festival*, September 2003.
- [7] “The eagle has landed?” (computer animation) with R. Grzeszczuk, April 1999, Intel Corporation; premier screening at *ACM SIGGRAPH 98*, August 1998 and at *NIPS '98*, December 1998.
- [8] “Bureaucrat too,” (computer animation) with K. Waters, Y. Lee, June 1995, in *ACM SIGGRAPH Video Review Issue 109: Selections from the Facial Animation Workshop*; premier screening at the *ACM SIGGRAPH 95 Computer Animation Festival*, Los Angeles, August 1995; broadcast on the Discovery Channel on 1/19/96 in the program *@discovery.ca*.
- [9] “A national geo-graphics society special: The undersea world of Jack Cousto,” (computer animation) with X. Tu, and R. Grzeszczuk, May 1995. **Screenings:** premier screening at the *ACM SIGGRAPH 95 Electronic Theater*, Los Angeles, August 1995; screened at the *NICOGRAPH '95 Computer Graphics Filmshow*, Tokyo, Japan, November 1995; screened at the *Toronto Computer Animation Festival*, Toronto, Canada, February 1996; screened at *Sonic Circuits '96* computer music conference, Toronto, October 1996; screened at the *International Scientific Film Festival*, Montreal, Canada, September 1995; screened at the *Graphics Interface '94 Electronic Theatre* (preliminary version), Banff, Alberta, May, 1994; screened at *Computer Animation '95*, Geneva, Switzerland, April 1995; screened at the *Teco Graphics '95* Computer Graphics Show, Milan, Italy, March 1995; screened at the *Japan Graphics Design Association Film & Video Show*, Tokyo, November 1995; screened at *Digital Flaherty*, Troy, NY, November 2001; screened at the *Royal Institution (of London)*, in a Friday Discourse lecture by Professor Margaret Boden, April 2002. **Broadcastings:** Excerpts broadcast on the Discovery Channel on 3/2/97 in the documentary *Minds, Machines & Mystery* in the series *Techno TV*; excerpts broadcast on 5/27/96 on RAI, Italian Radio TV System in the series *Superquark*; broadcast on Television Espanola, the main Spanish TV station, in the program *Metropolis*, October 1993; excerpts broadcast on the NHK Television Network (Japan) on 4/17/95 in the program *The Technology of the 20th Century (premiere program)*; excerpts broadcast on the Fuji Television Network (Japan) on 2/4/95 in the program *Revolution 8* (Episode #14 “Artificial Life”); excerpts broadcast in program *Computer Meeting* on Bayerischer Rundfunk TV, Germany, October 1995; excerpts first broadcast on the Discovery Channel on 2/1/95 in the pilot program *E-Scape Velocity*; excerpts broadcast on the CBC Television Network (Canada) on 1/15/95 in the program *Découverte* (in French);

- excerpts first broadcast on the Discovery Channel on 1/2/95 in the program @*discovery.ca*; excerpts included in the *Discovery Channel CRTC Promotional Reel* and broadcast on the *Discovery Channel Preview*, December 1994; broadcast on the program *NSTV* on Cable-69, New York, NY, October 16, 1994; excerpts broadcast on CFTO-TV, 12/31/94; broadcast on Television Espanola, the main Spanish TV station, in the program *Metropolis*, September 1995. **Exhibitions:** Excerpts on public display in the “Art & Aesthetics of Artificial Life” exhibition, *UCLA Center for Digital Arts*, Los Angeles, CA, July 1998. **CD-ROM Publications:** Excerpts published in “Aquatic Environments and Fishes,” CD-ROM module for course “An Introduction to Aquatic Environments,” produced by the Department of Zoology, University of Guelph, Guelph, Ontario, Canada, 1996 (CD is winner of the Sony Award of Achievement from the Canadian Association for Media and Technology in Education (AMTEC) and top AMTEC award for post-secondary education). Excerpts published in IDG Nieuwe Media’s multimedia CD-magazine “C!T-ROM 18”, IDG Communications, Netherlands, January 1998. Published in the CD-ROM *Images and Encyclopedies* by Diderot, L’encyclopedisme et Autres Association, France, 2002.
- [10] “Go fish!,” (computer animation) with X. Tu, E. Fiume, University of Toronto, May 1993, in ACM SIGGRAPH Video Review Issue 91: SIGGRAPH 93 Electronic Theater; extract in *Imagina 93-94 videotape & videodisk*, INA Entreprise, France, Polygram; award nominee at the *London Effects and Animation Festival*, London, UK, November 1994. **Screenings:** premier screening at the *ACM SIGGRAPH 93 Electronic Theatre Evening Show*, Anaheim, CA, August 1993; extract screened at the *ACM SIGGRAPH 2003 Electronic Theater Opening Sequence Special Features (10 Years Ago)*, San Diego, CA, July 2003; screened at the *London Effects and Animation Festival*; screened at the *Graphics Interface ’93 Electronic Theatre*, Toronto, ON, May 1993; screened at the *Premio Immagine ’93 International Evening of Virtual Images*, Milan, Italy, October, 1993; screened at *ICOGRAPHICS’94 Creative Computing Theatre* (and videocatalogue), March 1994, Milan, Italy; screened at the *Digital Media Awards Show*, Toronto, May, 1994; screened at the *Japan Graphics Design Association Film & Video Show*, Tokyo, March 1994; screened at *Sonic Circuits ’96 Festival of Electro-Acoustic Music*, Toronto, October 1996; screened at *Digital Flaherty*, Troy, NY, November 2001. **Broadcastings:** Excerpts broadcast on the Discovery Channel on 3/2/97 in the documentary *Minds, Machines & Mystery* in the series *Techno TV*; excerpts broadcast on 5/27/96 on RAI 1, Italian Radio TV System in the series *Superquark*; excerpts broadcast on the NHK Television Network (Japan) on 4/17/95 in the program *The Technology of the 20th Century (premiere program)*; excerpts broadcast in program *Computer Meeting* on Bayerischer Rundfunk TV, Germany, October 1995; broadcast on the program *NSTV* on Cable69, New York, NY, October 16, 1994; excerpts broadcast on the Fuji Television Network (Japan) on 2/4/95 in the program *Revolution 8* (Episode #14 “Artificial Life”); excerpts broadcast on the Discovery Channel on 2/1/95 in the pilot program *E-Scape Velocity*; excerpts broadcast on the CBC Television Network (Canada) on 1/15/95 in the program *Découverte* (in French); excerpts broadcast on the Discovery Channel on 1/2/95 in the program @*discovery.ca*; broadcast on the Fuji Television Network on 9/21/93 in *Supertime*, the most popular evening news program in the Tokyo area; broadcast on Television Espanola, the main Spanish TV station, in the program *Metropolis*, October 1993; broadcast on the Canal+ Television Network, France, 1994; **Exhibitions:** On public display as part of the 1993-94 exhibit at the “Vente” exhibition hall, Fujita, Corp., head offices, Tokyo; Excerpts on public display in the “Art & Aesthetics of Artificial Life” exhibition, *UCLA Center for Digital Arts*, Los Angeles, CA, July 1998
- [11] “Reconstruction and visualization of a human embryo heart,” with W.M. Hsu, I. Carlbom, M. Doyle, Digital Cambridge Research Lab, May 1993, in *ACM SIGGRAPH Video Review Issue 93: SIGGRAPH 93 Small Animation Theater Science Reel*, August 1993; premier screening at the ACM SIGGRAPH 93 Small Animation Theater, Anaheim, CA, August 1993; screened at the *SIGGRAPH/NE Meeting*, January 1993; screened at the *Telemedicine Seminar and Workshop*, Armed Forces Institute of Pathology, Rockville, MD, May 1993; screened at the *Second Human Developmental Anatomy Center Conference*, Washington, DC, November 1992.
- [12] “Reconstructing and visualizing neuronal dendrites,” with I. Carlbom, K. Harris, Digital Cambridge Research Lab, June 1991; premier screening at the *Computer Graphics International Conference (CGI ’91): Visualization of Physical Phenomena*, Cambridge, MA, June 1991.
- [13] “Bureaucrat,” (computer animation) with K. Waters, M. Cadell, June 1990, in *ACM SIGGRAPH Video Review Issue 109: Selections from the Facial Animation Workshop*; screened internationally at invited presentations.
- [14] “Inelastic models,” (computer animation) with K. Fleischer, Schlumberger Palo Alto Research, August 1988; premier screening at ACM SIGGRAPH 88 Technical Session; screened internationally during invited presentations. Excerpts on public display from 09/88 as part of a permanent exhibition “L’Image Calculee” at the museum *La Cité des Sciences et de l’Industrie*, Paris, and from 09/90 to 12/90 at “Beaubourg,” *National Museum of Modern Art*, Paris, France.

- [15] “Cooking with Kurt,” (computer animation) with K. Fleischer, A. Witkin, M. Kass, Schlumberger Palo Alto Research, April, 1987, in ACM SIGGRAPH Video Review Issue 36: SIGGRAPH 87 Film & Video Show; premier screening at SIGGRAPH 87 Film Show; screened internationally during invited presentations and at ACM SIGGRAPH 87 Technical Session, ACM SIGGRAPH 88 Animation Screening Room, Graphics Interface ’88 Electronic Theatre, Canada, IMAGINA ’88, Monaco.
- [16] “Elastically deformable models,” (computer animation) with K. Fleischer, Schlumberger Palo Alto Research, April 1987; premier screening at SIGGRAPH 87 technical session; screened at IMAGINA ’88, Monaco and internationally at invited presentations.

### Creative Works: Cover Illustrations, Published CG Images

- [1] “Virtual anatomy” (cover image), “Biomechanical human model”, and “Biomechanical neck-head model” (contents page image) in the article on “Realistic Human Simulation” by Matthew Chin, in the magazine *UCLA Engineer*, Fall 2009, Issue 22, 6–7. The former image also used as a banner image on the masthead of the UCLA Henry Samueli School of Engineering and Applied Science website [www.engineer.ucla.edu](http://www.engineer.ucla.edu), 2010.
- [2] “Flying carpet” and “Ball on deformable solid”, 4 images in article on “Physics-Based Simulation for Computer Graphics” (in Japanese) by K. Anjo in the mathematics magazine *Sugaku Seminar*, **48**(6), June 2009, 79–85.
- [3] “Artificial fish” and “Artificial shark stalking a school of prey fish,” two color plates in *Climbing Mount Improbable*, by R. Dawkins, Folio Society, 2008. Also two monochrome plates in the 2006 Penguin edition and in the 1996 Viking edition.
- [4] “Autonomous pedestrians in the penn station concourses”, color image published on the *Technology Review* website ([www.technologyreview.com](http://www.technologyreview.com)), December 19, 2007, in a story entitled “Virtual Extras” by Duncan Graham-Rowe.
- [5] “Pedestrian segmentation and tracking,” color image on the cover of the proceedings of the *Second Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (VS-PETS 05)*, R. Chellappa, J. Ferryman, T. Tan (eds.), IEEE Computer Society Press, Beijing, China, October 2005.
- [6] “Synthetic faces,” 3 color images, “Artificial Fish,” 2 color images, and color image “Ball on Deformable Solid” in the book *3DCG Animation: Fundamentals to State of the Art* (in Japanese), by T. Kurihara, K. Anjo, Gijutsu Hyoron-Sha Co., Tokyo, 2003, pgs. 153, 187, 212.
- [7] “Virtual stuntman,” 3 color images in *Gazeta Wyborcza Nauka* (the leading Polish newspaper), January 23, 2002, in a story entitled “Komputerowa animacja zamiast popisów kaskadera” by Marcin Bójko.
- [8] “Virtual stunt artist,” 10 color images in *New Scientist*, January 17, 2002, in a story entitled “Virtual stunt artists take first tumbles” by Duncan Graham-Rowe.
- [9] “Behaviorally modelled fish,” 1 color image, and “Intelligent models are capable of learning from their own action,” 4 color images in *The Computer Animator’s Technical Handbook*, by L. Pocock, J. Rosebush, Morgan Kaufmann, 2002.
- [10] “Artificial fish” and “Simfish,” 2 images in the *YLEM Journal: Artists Using Science and Technology*, **21**(10 & 12), November/December 2001, in the article “Spending Your Triangles,” by Rudy Rucker, pgs. 14–15 and 16–17.
- [11] “Biomechanical fish model,” cover image for the 2000 volume of the journal *Artificial Life*, MIT Press.
- [12] “Shark stalking school of prey,” color image in the book *Visual Computing* by R.M. Friedhoff, M.S. Peercy, Scientific American Library, 2000, pg. 86.
- [13] “Merman vs shark,” color image in *Business Week*, March 20, 2000, pg. 81, in a piece entitled “These Creatures May Be Smarter than the Script” contributed by N. Gross in the “Developments to Watch” column.
- [14] “Images from cooking with Kurt,” 4 color images on back cover of *Computer Graphics*, **33**(4), November 1999, 42–45. Special issue on Applications of Computer Vision to Computer Graphics.
- [15] “Flying carpet,” color image in the textbook *Computer Graphics Gijutsu-hen: CG Standard Textbook* (in Japanese), M. Nakajima (ed.), CG-Arts Society, Japan, 1999, pg. 24.
- [16] “A classic image from analysis/synthesis research in facial animation by Terzopoulos and Waters,” in *The Computer Image*, by A. Watt, F. Policarpo, Addison-Wesley, New York, 1998, pg. 513.

- [17] “Artificial fishes,” 3 images in *Silicon Second Nature: Culturing Artificial Life in a Digital World*, by S. Helreich, University of California Press, 1998.
- [18] “Schooling fish” and “Shark Stalking a School of Prey,” 2 images in *Nikkei Techno Frontier*, **42**, June 24, 1996, pg. 8, in article “Swarm Intelligence” (in Japanese) by K. Kato.
- [19] “Shark stalking a school of prey,” color image in *Asahi Shimbun Newspaper*, Japan, June 5, 1996.
- [20] “Twenty-first century cyberactors,” images in *Weekly Reader Current Events*, **95**(20), March 1, 1996, pp. 2d.
- [21] “Computer modeling of fish,” color image in 8th grade mathematics textbook *Minds on Math 8*, by R. Alexander et al., Addison-Wesley, 1996, pg. 42.
- [22] “Fish and silicon chips,” color plate 10 in *Frontiers of Complexity: The Search for Order in a Chaotic World*, by P. Coveney, R. Highfield, Ballantine Books, New York, 1995.
- [23] “Undersea world of Jack Cousto,” color image in *ASCII Magazine* (Japan), **19**(11), November 1995, pp. 328.
- [24] “These fishes live in their computer aquarium,” color image in *Ca M’Interesse* magazine, No. 175, September 1995, Paris, France, in article “And man creates artificial life,” by F. Herrmann; also color image in *Micro Jr.* magazine, July 1995, in article “Life on the micro planet?” by H. Kempf.
- [25] Ten color images of virtual fishes in *The World and I*, **10**(6), June 1995, pp. 222–229, in article “Fishes of the Silicon Sea,” by G. Levinson.
- [26] “Artificial fish in a virtual marine world,” color image on front cover of *Journal of the Japan Society for Simulation Technology*, **13**(4), December 1994; also 2 monochrome images on pg. 296 of issue in review article “Artificial Life and Simulation” (in Japanese) by Y. Kakazu and K. Suzuki.
- [27] “Virtual fish are the catch of the day,” monochrome image in *The Globe and Mail* (Toronto), **45**(155), Saturday, August 10, 1994, pp. D8, illustrating a “science and technology” news story on artificial fishes by S. Strauss.
- [28] “Swimming in a computer,” color image in *FOCUS News Magazine*, **34**(22), August 1994, pp. 83, illustrating a news story in German on artificial life research by J. Scriba.
- [29] “Artificial fish,” 2 color images in *The Daily Telegraph* (London, UK), Monday, August 22, 1994, pp. 28, illustrating a news story on artificial fishes by R. Highfield; also published as color plates in the book “Artificial Life,” (in Japanese) by K. Hattori, Ohmsha, 1994, pp. 3.
- [30] “Artificial fish in a virtual marine world,” color image in *Science News*, **146**(3), July 1994, pp. 37, illustrating a “Science News of the Week” story on artificial fishes by R. Lipkin.
- [31] “Synthetic faces,” 4 color images, in *Popular Mechanics* magazine, March 1994, illustrating the article “Beyond Jurassic Park,” by K. Carmichael.
- [32] “Go fish,” with X. Tu, E. Fiume; three color images in *ASCII Magazine* (Japan), **17**(11), November 1993, pp. 364; also image on front cover of ACM SIGGRAPH 94 Advance Program.
- [33] “Finite element surface reconstruction,” with T. McInerney; image on front cover of *Proceedings Vision Interface ’93*, Morgan Kaufmann, Los Altos, CA, 1993.
- [34] “The latest in facial animation,” with Y. Lee; four color images in *Computer Graphics World*, **16**(3), March 1993, illustrating the article “Physical Graphics” by B. Robertson on the state of physics based modeling research.
- [35] “Tearing nets” with K. Fleischer; color image sequence in *Computer Graphics: Principles and Practice, 2nd Ed.*, by Foley, Van Dam, Feiner, and Hughes, Addison-Wesley, 1990, reprinted from “Modeling inelastic deformation: ...” *Computer Graphics*, **22**(4), 1988.
- [36] “April 15, 1988,” with K. Fleischer; color image on front cover of *Computer Graphics World*, **12**(4), April 1989, illustrating an article by B. Robertson on physics based modeling research.
- [37] “Inelastic deformation applied to a bust of Victor Hugo,” with K. Fleischer; color image on front cover of *Proceedings Graphics Interface ’88*, Morgan Kaufmann, Los Altos, CA, 1988; also in ACM SIGGRAPH 88 Technical Slide Exhibition.
- [38] “Flying carpet 4,” color image on back cover of *Computer Graphics*, **21**(4), 1987.



## D Invited Talks

### Distinguished Lectures, Keynote Addresses, Plenary Addresses

- [1] “Data-Driven AI for Medicine and Media,” keynote address delivered at the *SJTU-UCLA Center for Machine Perception and Inference Inaugural Symposium*, Shanghai Jiao Tong University, Shanghai, China, June 2018.
- [2] “Biomimetic Human Perception and Sensorimotor Control,” keynote address delivered at *JKT65: A Verbal Festschrift*, York University, Toronto, ON, May 2018.
- [3] “Data-Driven AI for the Entertainment and Healthcare Industries,” keynote address delivered at the *IDEAS Southern California Data Science Conference 2017*, Pasadena, CA, October 2017.
- [4] “Model-Based and Data-Driven AI Approaches to Medical Image Analysis,” keynote address delivered at the *2017 Intelligence in Medicine Summit (IMS 2017)*, Stanford, CA, August 2017.
- [5] “Artificial Intelligence for Visual Computing,” keynote address delivered at the *Silicon Valley Future Forum 2017 AI & Investment Conference*, Santa Clara, CA, July 2017.
- [6] “The Computer Simulation of People: From Biomechanics to Intelligence,” distinguished lecture delivered at the *Centre for Innovation in Computing, Lassonde School of Engineering, York University*, Toronto, ON, January 2017.
- [7] “Artificial Intelligence and Model-Based Medical Image Analysis”, keynote address delivered at the *2016 Annual Symposium of the Shanghai Society of Biomedical Engineering*, Shanghai, China, September 2016.
- [8] “The Computer Simulation of People,” keynote address delivered at the *2015 Microsoft Conference on Computing in the 21st Century*, Beijing, China, October 2015.
- [9] “Virtual Vision: Computer Vision in Virtual Reality,” keynote address delivered at the *1st Chinese Conference on Computer Vision (CCCV’15)*, Xi’an, China, September 2015.
- [10] “Realistic Biomechanical Human Simulation with Neuromuscular Motor Control,” keynote address delivered at the *2015 Conference on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE’15)*, Montreal, Canada, September 2015.
- [11] “Cognitive Vision and its Applications,” Keynote address delivered at the *CogSci Workshop on Physical and Social Scene Understanding*, Pasadena, CA, July 2015.
- [12] “Advanced Modeling for Vision,” keynote address delivered at the *12th Conference on Computer and Robot Vision (CRV’15)*, Halifax, NS, June 2015.
- [13] “The Computer Simulation of Humans,” distinguished lecture delivered in the *New Fellows Seminar*, Royal Society, London, UK, July 2014.
- [14] “Cognitive Vision and its Application to Medical Imaging, Visual Surveillance, and Space Robotics,” keynote address delivered in the *First IEEE Workshop on Vision Meets Cognition: Functionality, Physics, Intentionality, and Causality (FPIC)*, Columbus, OH, June 2014.
- [15] “Simulated Fishes (and Other Swimmers),” keynote address delivered at the *NOAA Fisheries Stock Assessment Workshop*, National Academy of Sciences, Washington, DC, May 2014.
- [16] “Human Simulation at the Biomechanical, Behavioral and Social Levels,” *Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences at UCLA*, UCLA School of Management, Los Angeles, CA, May 2014.
- [17] “Human Simulation: From Biomechanics to Intelligence,” distinguished lecture delivered in the Department of Computer Science, Wayne State University, Detroit, MI, January 2014.
- [18] “Virtual Vision: Computer Vision in Virtual Reality,” keynote address delivered at the *Eighth IEEE International Conference on Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP 2012)*, Athens, Greece, July 2012.
- [19] “Virtual Vision: Computer Vision in Virtual Reality,” keynote address delivered at the *First IEEE Workshop on Modeling, Simulation, and Visual Analysis of Large Crowds*, Barcelona, Spain, November 2011.
- [20] “Realistic Multi-Human Simulation,” distinguished speech delivered at the *Okawa Foundation Research Grant Presentation Ceremony*, San Francisco, CA, November 2011.
- [21] “Virtual Vision: Computer Vision in Virtual Reality,” keynote address delivered at the *2011 IEEE International Conference on Multimedia Technology (ICMT 2011)*, Hangzhou, China, July 2011.

- [22] “Biomimetic Human Modeling, Simulation and Control,” keynote address delivered at the *15th World Scientific and Engineering Academy and Society (WSEAS) Multiconference on Circuits, Systems, Computers, and Communications (CSCC 2011)*, Corfu, Greece, July 2011.
- [23] “Virtual Vision: Computer Vision in Virtual Reality,” plenary address delivered at the *IEEE International Conference on Multimedia and Expo (ICME 2011)*, Barcelona, Spain, July 2011.
- [24] “Virtual Vision: Computer Vision in Virtual Reality,” keynote address delivered at the *First IEEE Workshop on Camera Networks and Wide-Area Scene Analysis*, Colorado Springs, CO, June 2011.
- [25] “Human Simulation: From Biomechanics to Intelligence,” distinguished lecture delivered in the Computer and Information Science Department, Indiana University-Purdue University Indianapolis, Indianapolis, IN, April 2011.
- [26] “Artificial Life Simulation of Humans and Lower Animals: From Biomechanics to Intelligence,” distinguished lecture delivered in the *College of Engineering Distinguished Speaker Series*, University of Texas, Arlington, TX, December 2010.
- [27] “Model-Based Image Analysis and Human Modeling Applied to Healthcare,” keynote address delivered at the *3rd International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2010)*, Samos, Greece, June 2010.
- [28] “Artificial Life Simulation of Humans and Lower Animals: From Biomechanics to Intelligence,” distinguished lecture delivered in the Computer Science Department Distinguished Lecturer Series, University of California, Irvine, CA, June 2010.
- [29] “Artificial Life Simulation of Humans and Lower Animals: From Biomechanics to Intelligence,” keynote address delivered at the *6th Hellenic Conference on Artificial Intelligence (SETN 2010)*, Athens, Greece, May 2010.
- [30] “Biomechanical and Artificial Life Simulation of Humans for Animation and Games,” keynote address delivered at the *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D 2010)*, Bethesda, MD, February 2010.
- [31] “Graphics, Vision, Modeling: A Personal Golden Braid,” banquet keynote address delivered at the *5th International Symposium on Visual Computing (ISVC)*, Las Vegas, NV, November 2009.
- [32] “Deformable Models and Tensor Algebraic Methods for Imaging Science,” distinguished lecture delivered in the Distinguished Speaker Seminar Series, Center for Imaging Science, Johns Hopkins University, Baltimore, MD, November 2009.
- [33] “Artificial Life Simulation of Humans and Lower Animals: From Biomechanics to Intelligence,” keynote address delivered at the *14th Portuguese Conference on Artificial Intelligence (EPIA 2009)*, Aveiro, Portugal, October 2009.
- [34] “Deformable and Functional Models with Applications to Medical Image Analysis,” plenary address delivered at the *2nd ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing (VIPIMAGE 2009)*, Porto, Portugal, October 2009.
- [35] “Virtual Vision: Simulating Camera Networks in Virtual Reality for Surveillance System Design and Evaluation,” plenary address delivered at the *6th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 09)*, Genova, Italy, September 2009.
- [36] “Artificial Life Simulation of Humans and Lower Animals: From Biomechanics to Intelligence,” keynote address delivered at the *ACM Genetic and Evolutionary Computation Conference (GECCO 2009)*, Montreal, Canada, July 2009.
- [37] “Image and Surface Models for Vision and Graphics,” plenary address delivered at the *Midwest Conference on Mathematical Methods for Images and Surfaces*, Michigan State University, East Lansing, MI, April 2009.
- [38] “The Simulation of Humans and Lower Animals,” keynote address delivered at the *11th SPIE Conference on Electroactive Polymer Actuators and Devices (EAPAD)*, San Diego, CA, March 2009.
- [39] *2008 IEEE Workshop on 3D Face Processing*, Anchorage, AK, June 2008.
- [40] *Cognitive Animation Workshop*, Yosemite, CA, June 2008.
- [41] *International Joint Conference on Autonomous Agents and Multiagent Systems*, Estoril, Portugal, May 2008.
- [42] *Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences*, UCLA, Nov 2007.
- [43] *Computer Science and Engineering Distinguished Lecture Series*, Univ. of California, Riverside, CA, Oct 2007.
- [44] *2nd IEEE International Workshop on Human Motion*, Rio de Janeiro, Brazil, October 2007.

- [45] *10th International Conference on Computer-Aided Design and Computer Graphics*, Beijing, China, Oct 2007.
- [46] Univ. of Central Florida, CS Dept., Computer Vision Distinguished Speaker Series, Orlando, FL, October 2007.
- [47] U. of South Florida, Cntr of Excellence for Pattern Recog. Distinguished Speaker Series, Tampa, FL, Oct 2007.
- [48] University of Florida, Barr Systems Distinguished Lecture, Gainesville, FL, October 2007.
- [49] *UCLA Computer Science Alumni Reception*, Google, Inc., Irvine, CA, September 2007.
- [50] *Sixth International Conference on 3D Digital Imaging and Modeling (3DIM'07)*, Montreal, Canada, Aug 2007.
- [51] INRIA, Colloquium Jacques Morgenstern, Sophia-Antipolis, France, December 2006.
- [52] University of Missouri, College of Engineering Sterling Hou Distinguished Lecture, Columbia, MO, Nov 2006.
- [53] Ecole Centrale de Paris, Applied Mathematics and Systems Laboratory, Paris, France, September 2006.
- [54] University of Genova, Computer Science Department, Genova, Italy, September 2006.
- [55] *Tokyo ACM SIGGRAPH 10th Anniversary Conference*, Tokyo, Japan, June 2006.
- [56] *5th Int'l Workshop on Energy Minimization Methods in CV and PR*, St. Augustine, FL, November 2005.
- [57] *UBC Inst. for Comput., Inform. & Cognitive Systems*, Distinguished Lecture Series, Vancouver, BC, Oct 2005.
- [58] *3rd IEEE Workshop on Variational, Geometric, and Level Set Methods in CV*, Beijing, China, October 2005.
- [59] *2005 IEEE Western New York Image Processing Workshop*, Rochester, NY, September 2005.
- [60] *IMA 2nd Int'l Conf. on Vision, Video and Graphics*, Heriot-Watt University, Edinburgh, UK, July 2005.
- [61] *2005 Computer Graphics International Conference (CGI 2005)*, Stony Brook, NY, June 2005.
- [62] Drexel University, Computer Science Department, Philadelphia, PA, January 2005.
- [63] Oregon State University, Computer Science Department, Corvallis, OR, November 2004.
- [64] *The 2nd International Symposium on 3D Data Processing, ... (3DPVT 2004)*, Thessaloniki, Greece, Sept 2004.
- [65] *6th IEEE International Conf. on Automatic Face and Gesture Recognition (FG'04)*, Seoul, Korea, May 2004.
- [66] *7th Annual Teaching and Technology Conference*, New York, NY, March 2004.
- [67] *Workshop on Mathematical Methods in Imaging and Vision*, Gainesville, FL, January 2004.
- [68] *10th ACM Symposium on Virtual Reality Software and Technology (VRST'03)*, Osaka, Japan, October 2003.
- [69] Columbia University, Columbia Vision and Graphics Distinguished Lecture Series, New York, NY, Feb 2003.
- [70] Simon Fraser University, Schools of Computing and Engineering Science, Barnaby, BC, January 2003.
- [71] Koerner Foundation Lecture, Simon Fraser University at Harbour Centre, Vancouver, BC, January 2003.
- [72] *5th IEEE Workshop on Multimedia Signal Processing (MMSP'02)*, St. Thomas, US Virgin Islands, Dec 2002.
- [73] University of Minnesota, CS&E Department, Cray Distinguished Lecture, Minneapolis, MN, September 2002.
- [74] *EUROGRAPHICS 2002 Conference*, Saarbruecken, Germany, September 2002.
- [75] *3rd Distinguished New York Computer Scientists Symposium*, NYAS, New York, NY, May 2002
- [76] *IM Distinguished Seminar Series*, Siemens Corporate Research, Princeton, NJ, March 2002.
- [77] *CUNY Wired! Conference*, City University of New York, New York, NY, March 2002.
- [78] *Workshop on Medical Image Processing*, Leipzig, Germany, March 2002.
- [79] *2001 APICS Mathematics/Statistics and Computer Science Joint Conference*, Antigonish, NS, October 2001.
- [80] *Tenth Portuguese Computer Graphics Conference*, Lisbon, Portugal, October 2001.
- [81] *XXVII International Ethological Conference (IEC 2001)*, Tuebingen, Germany, August 2001.
- [82] *International Conference on Scientific Computation & Differential Equations*, Vancouver, Canada, July 2001.
- [83] 2001 Presidential Lecture, New York University, New York, NY, April 2001.
- [84] *Game Technology Conference 2001 (GTec'01)*, Hong Kong, China, January 2001.
- [85] SUNY Stony Brook, Dept. of CS, Solomon Smith Barney Distinguished Lecture, Stony Brook, NY, Oct 2000.
- [86] Topol Distinguished Lecture, Univ. of Massachusetts at Amherst, Dept. of CS, Amherst, MA, September 2000.
- [87] Ohio State University, Department of Computer and Information Science, Columbus, OH, September 2000.
- [88] *Math 2000: Canadian Mathematics Society Meeting*, Hamilton, ON, June 2000.
- [89] *Graphics Interface 00 Conference*, Montreal, Canada, June 2000.
- [90] *Royal Canadian Institute for the Advancement of Science*, Toronto, ON, January 2000.
- [91] *1999 Erlangen Workshop on Vision, Modeling, & Visualiz'n*, Fraunhofer Inst., Erlangen, Germany, Nov. 1999.
- [92] *23rd Annual Meeting of the American Society of Biomechanics*, Pittsburgh, PA, October 1999.
- [93] *3rd International Conf. on Synthetic & Natural Hybrid Coding & 3D Imaging*, Santorini, Greece, Sept. 1999.
- [94] *Second Workshop on Intelligent Virtual Agents (IVA'99)*, Salford, UK, September 1999.
- [95] *15th Annual ACM Symposium on Computational Geometry (SoCG'99)*, Miami, FL, June 1999.
- [96] *9th Spanish Computer Graphics Conference (CEIG'99)*, Jaén, Spain, June 1999.
- [97] PARC Forum, Xerox Palo Alto Resarch Center, Palo Alto, CA, March 1999.
- [98] Cornell University, Department of Computer Science, Ithaca, NY, February 1999.
- [99] 1998 DARPA Image Understanding Workshop, Monterey, CA, November 1998.

- [100] *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS '98)*, Victoria, Canada, October 1998.
- [101] Princeton University, Dept. of CS Distinguished Lecture Series, Princeton, NJ, October 1998.
- [102] University of Delaware, Dept. of Computer and Information Sciences, Newark, DE, October 1998
- [103] *9th NEC Research Symposium*, Nara, Japan, August 1998.
- [104] *Visual Computing 98 Conference*, Mexico City, Mexico, April 1998.
- [105] University of Southern California, Dept. of Computer Science and IMSC, Los Angeles, CA, January 1998.
- [106] *4th International Conf. on Mathematical Methods for Curves and Surfaces*, Lillehammer, Norway, July 1997.
- [107] *1st IEEE International Conference on 3D Digital Imaging and Modeling (3DIM 97)*, Ottawa, ON, May 1997.
- [108] Yale University, Alan J. Perlis Lecture, New Haven, CT, April 1997.
- [109] Georgia Institute of Technology, GVU Center Distinguished Lecture, Atlanta, GA, October 1996.
- [110] *16th Leeds Annual Statistical Research Workshop*, University of Leeds, Leeds, England, July 1996.
- [111] *IEEE Workshop on Mathematical Methods in Biomedical Image Analysis*, San Francisco, CA, June 1996.
- [112] Rutgers University, Dept. of Computer Science Distinguished Colloquium, New Brunswick, NJ, Feb. 1996.
- [113] *4th SIAM Conference on Geometric Design*, Nashville, TN, November 1995.
- [114] *14th International Joint Conference on Artificial Intelligence (IJCAI'95)*, Montreal, Canada, August 1995.
- [115] *3rd Pacific Conf. on Computer Graphics and Applications (Pacific Graphics '95)*, Seoul, Korea, August 1995.
- [116] University of Florida, Barr Systems Distinguished Lecture, Gainesville, FL, February 1995.
- [117] *1st New Zealand Conference on Image and Vision Computing*, Auckland, New Zealand, August 1993.
- [118] *4th Portuguese Computer Graphics Conference*, Lisbon, Portugal, November 1991.
- [119] *British Machine Vision Conference*, Glasgow, Scotland, September 1991.
- [120] University of Toronto, Department of Computer Science Distinguished Lecture, Toronto, ON, December 1989.

#### **Declined Keynote/Plenary Speaker Invitations (Selected):**

- Amity International Conference on Artificial Intelligence (AICAI)*, Amity University, Dubai, UAE, February 2019.
- Techniche 2018*, Indian Institute of Technology, Guwahati, India, September 2018.
- ACM SIGGRAPH International Conference on Emerging Technology in Modeling and Graphics (IEMGraph)*, Kolkata, India, September 2018.
- 8th Annual UCLA/PKU Joint Research Initiative (JRI) Symposium*, Beijing, June 2017.
- First International Conference on Computer and Information Science and Technology (CIST'15)*, Ottawa, ON, May 2015.
- Sixth Chinese Conference on Pattern Recognition (CCPR 2014)*, ChangSha, China, November 2014.
- Workshop on Computing in Image Processing, Computer Graphics, Virtual Surgery, and Sports*, Institute for Mathematics and Its Applications (IMA), University of Minnesota, Minneapolis, MN, March 2011.
- 5th Workshop on Computer Vision in Brazil*, Sao Paulo, Sept. 2009.
- Biomedical Imaging and Computer Vision (BICV) Symposium*, University of Waterloo, Waterloo, ON, September 2007.
- 6th International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMM-CVPR)*, EZhou, China, August 2007.
- 2nd International Conference on Computer Science and Education*, Wuhan, China, July 2007.

#### **Colloquia**

- [121] “A Tensor Algebraic Framework for Image Science,” Advanced Lecture Series of Pattern Recognition, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China, September 2015.
- [122] “Tensor Algebraic Image Representation for Synthesis and Recognition,” INRIA, Paris, France, July 2014.
- [123] “Tensor Algebraic Image Representation for Synthesis and Recognition,” Microsoft Research Cambridge, Cambridge, UK, July 2014.
- [124] “Human Simulation: From Biomechanics to Intelligence,” Department of Applied Physics Colloquium, Waseda University, Tokyo, Japan, June 2012.

- [125] “Human Simulation: From Biomechanics to Intelligence,” Seminar on Human, Avatar, and Robot Motion, Computer Science Department, Stanford University, Stanford, CA, April 2011.
- [126] “Learning Neuromuscular Control for the Biomechanical Simulation of the Neck-Head-Face Complex,” Machine Learning Group, University of Toronto, Toronto, ON, March 2011.
- [127] “Human Simulation: From Biomechanics to Intelligence,” Beckman Institute, University of Illinois at Urbana-Champaign, Champaign, IL, October 2010.
- [128] “Human Simulation: From Biomechanics to Intelligence,” MIT Colloquium on the Brain and Cognition, Department of Brain and Cognitive Sciences, McGovern Institute for Brain Research, and Picower Institute for Learning and Memory, Massachusetts Institute of Technology, Cambridge, MA, October 2010.
- [129] “Artificial Life and Biomechanical Simulation of Humans,” Multimedia Science and Arts Colloquium, Waseda University, Tokyo, Japan, March 2009.
- [130] “Autonomous Virtual Humans and Applications,” Disney Imagineering R&D, Inc., Glendale, CA, January 2009.
- [131] Institute for Infocomm Research, Singapore, December 2008.
- [132] UCLA Center for Computational Biology, Los Angeles, CA, November 2008.
- [133] Providence Tarzana Medical Center, Los Angeles, CA, November 2008.
- [134] *UCLA ACM Spring General Body Meeting*, UCLA, Los Angeles, CA, April 2008.
- [135] Rusch Engineering Honors Colloquium, USC Viterbi School of Engineering, Los Angeles, CA, January 2008.
- [136] Robotics Seminar, Jet Propulsion Lab, May 2007.
- [137] Ecology and Evolutionary Biology Seminar, Biology Department, UCLA, January 2007.
- [138] ETH, Computer Science Department, Zurich, December 2006.
- [139] Center for Advanced Surgical and Interventional Technology, School of Medicine, UCLA, October 2006.
- [140] Microsoft Corporation, Redmond, WA, October 2006.
- [141] INRIA, Rocquencourt, France, September 2006.
- [142] Ecole Normale Supérieure, Département d’Informatique, Paris, France, September 2006.
- [143] Waseda University, Department of Applied Physics, Tokyo, Japan, June 2006.
- [144] UCLA, Psychology Department, June 2006.
- [145] Wayne State University, Department of Computer Science, Detroit, MI, November 2005.
- [146] University of Utah, Computer Science Department, Salt Lake City, UT, April 2005.
- [147] University of California at Los Angeles, Computer Science Department, Los Angeles, CA, March 2005.
- [148] Institute for Pure and Applied Mathematics, UCLA, Los Angeles, CA, November 2004.
- [149] University of California at Los Angeles, Computer Science Department, Los Angeles, CA, October 2004.
- [150] Ewha Womans University, Computer Science and Engineering Department, Seoul, Korea, October 2004.
- [151] Korea Advanced Institute of Science and Technology (KAIST), Dept. of EECS, Daejeon, Korea, October 2004.
- [152] Univ. of Toronto at Mississauga, Dept of Math and Computational Sciences, Mississauga, ON, March 2004.
- [153] New York University, School of Medicine, New York, NY, November 2003.
- [154] University of Pennsylvania, Department of Radiology, Philadelphia, PA, September 2003.
- [155] Brown University, Department of Electrical Engineering, Providence, RI, April 2003.
- [156] Mount Sinai School of Medicine, Department of Radiology, New York, NY, February 2003.
- [157] Simon Fraser University, Center for Systems Science, Barnaby, BC, January 2003.
- [158] Medical Imaging Seminar, General Electric Global Research, Niskayuna, NY, September 2002.
- [159] Department of Computer Science, Yale University, New Haven, CT, April 2002.
- [160] Applied and Computational Mathematics Dept, California Institute of Technology, Pasadena, CA, March 2002.
- [161] Max Plank Institute for Cognitive Neuroscience, Leipzig, Germany, March 2002.
- [162] University of Pennsylvania, Computer and Information Science, Philadelphia, PA, September 2001.
- [163] Honda Research Institute, Inc., Mountain View, CA, December 2000.
- [164] IBM Almaden Research Center, San Jose, CA, August 2000.
- [165] Pixar, Inc., Richmond, CA, August 2000.
- [166] University of Southern California, Department of Computer Science, CA, March 2000.
- [167] USC Institute for Creative Technologies, CA, March 2000.
- [168] University of Louisville, Louisville, KY, February 2000.
- [169] INRIA, Sophia-Antipolis, France, December 1999.
- [170] University of Maryland, Department of Computer Science, College Park, MD, December 1999.
- [171] Max Plank Institute for Biological Cybernetics, Tübingen, Germany, November 1999.

- [172] University College London, Gatsby Neuroscience Unit, London, UK, September 1999.
- [173] Macdonald Dettwiler Space and Advanced Robotics Ltd., Brampton, ON, Canada, July 1999.
- [174] University of Tokyo, Institute of Industrial Science, Tokyo, September 1999.
- [175] Brown University, Applied Math, Computer Science & Engineering Seminar, Providence, RI, July 1999.
- [176] University of Utah, SGI-Utah Visual Supercomputer Center, Salt Lake City, UT, March 1999.
- [177] Brigham Young University, Department of Computer Science, Provo, Utah, March 1999.
- [178] Princeton University, Department of Computer Science, Princeton, NJ, February 1999.
- [179] New York University, Courant Institute of Mathematical Sciences, New York, NY, February 1999.
- [180] University of Colorado, Department of Computer Science, Boulder, CO, December 1998.
- [181] Toppan Printing Company, Ltd., Virtual Reality Laboratory, Tokyo, Japan, November 1998.
- [182] Sony Computer Science Laboratory, Inc., Tokyo, Japan, November 1998.
- [183] University of Osaka, Dept. of Adaptive Machine Systems, Osaka, Japan, November 1998.
- [184] National Taiwan University, Dept. of Comp. Sci. and Info. Eng., Taipei, Taiwan, November 1998.
- [185] Industrial Technology Research Institute, Comp. & Com. Research Labs, Hsin Chu, Taiwan, November 1998.
- [186] MIT Artificial Intelligence Laboratory, Cambridge, MA, October 1998.
- [187] Lawrence Livermore National Laboratory, Livermore, CA, November, 1997.
- [188] University of California at Davis, Institute of Theoretical Dynamics, Davis, CA, October 1997.
- [189] Intel Corporation, Hillsboro, OR, September 1997.
- [190] University of Rochester, Department of Computer Science, Rochester, NY, July 1997.
- [191] Mitsubishi Electric Research Laboratory, Cambridge, MA, June 1997.
- [192] McMaster University, Department of Computer Science, Hamilton, ON, February 1997.
- [193] Intel Corporation, Santa Clara, CA, December 1996.
- [194] Carnegie-Mellon University, Robotics Institute, Pittsburgh, PA, July 1996.
- [195] MIT, Department of Ocean Engineering, Cambridge, MA, March 1996.
- [196] MIT, Department of Brain and Cognitive Science, Cambridge, MA, February 1996.
- [197] Lucent Technologies, Inc., Murray Hill, NJ, February 1996.
- [198] Brandeis University, Computer Science Department, Waltham, MA, February 1996.
- [199] University of British Columbia, Department of Computer Science, Vancouver, BC, December 1995.
- [200] York University, Department of Psychology, North York, ON, December 1995.
- [201] Brown University, Division of Applied Mathematics, Providence, RI, November 1995.
- [202] University of Rochester, Department of Computer Science, Rochester, NY, October 1995.
- [203] NHK (Japan Broadcasting Corp.), Tokyo, Japan, October 1995.
- [204] Université Paris Dauphine, CEREMADE, Paris, France, May 1995.
- [205] University of Central Florida, Computer Science Department, Orlando, FL, April 1995.
- [206] National Polytechnic Institute of Grenoble, iMAGIS/IMAG, Grenoble, France, March 1995.
- [207] Northwestern University, Institute for the Learning Sciences, Evanston, IL, February 1995.
- [208] York University, Department of Computer Science, North York, ON, November 1994.
- [209] SRI International, Menlo Park, CA, November 1994.
- [210] Hewlett-Packard, Inc., Palo Alto, CA, November 1994.
- [211] Interval Research Corp., Palo Alto, CA, November 1994.
- [212] University of Guelph, Institute of Ichthyology, Guelph, ON, October 1994.
- [213] McGill University, School of Computer Science, Montreal, Canada, October 1994.
- [214] Microsoft Corporation, Redmond, WA, June 1994.
- [215] Carnegie-Mellon University, Robotics Institute, Pittsburgh, PA, May 1994.
- [216] MIT, Department of Electrical Engineering and Computer Science, Cambridge, MA, April 1994.
- [217] Digital Equipment Corporation, Cambridge Research Laboratory, Cambridge, MA, April 1994.
- [218] University of Rochester, Department of Computer Science, Rochester, NY, April 1994.
- [219] University of Rochester, Department of Electrical Engineering, Rochester, NY, April 1994.
- [220] Silicon Graphics, Inc., Mountain View, CA, March 1994.
- [221] Xerox Palo Alto Research Center, Palo Alto, CA, March 1994.
- [222] Université Paris Dauphine, CEREMADE, Paris, France, January 1994.
- [223] Medialab, Inc., Paris, France, January 1994.
- [224] University of Toronto, Institute for Environmental Studies, Toronto, January 1994.
- [225] NEC Research Institute, Princeton, NJ, January 1994.
- [226] Nippon Telegraph and Telephone Co., Musashino R&D Center, Musashino, Tokyo, Japan, December 1993.

- [227] Hitachi, Ltd., Kokubunji, Tokyo, Japan, December 1993.
- [228] MIT Artificial Intelligence Lab, Cambridge, MA, November 1993.
- [229] Atomic Energy of Canada Limited, Chalk River Research Laboratories, Chalk River, ON, May 1993.
- [230] Department of Radiology, Massachusetts General Hospital, Boston, MA, May 1993.
- [231] Stanford University, Department of Computer Science, Stanford, CA, April 1993.
- [232] Digital Equipment Corporation, Cambridge Research Laboratory, Cambridge, MA, March 1993.
- [233] California Institute of Technology, Computation and Neural Systems Dept., Pasadena, CA, February 1993.
- [234] Brown University, Department of Electrical Engineering, Providence, RI, October 1992.
- [235] Queen's University, Department of Computer and Information Sciences, Kingston, ON, February 1992.
- [236] Columbia University, Department of Computer Science, New York, NY, December 1991.
- [237] University of Massachusetts Medical School, Worcester, MA, October 1991.
- [238] Cornell University, Department of Computer Science, Ithaca, NY, October 1991.
- [239] University of Sheffield, Department of Psychology, Sheffield, England, September 1991.
- [240] University of Pennsylvania, Department of Computer and Information Science, Philadelphia, PA, March 1991.
- [241] National Research Council of Canada, Institute for Information Technology, Ottawa, ON, March 1991.
- [242] SRI International, Artificial Intelligence Center, Menlo Park, CA, December 1990.
- [243] Nippon Telegraph and Telephone Co., Musashino R&D Center, Musashino, Tokyo, Japan, December 1990.
- [244] University of Texas, Computer and Vision Research Center, Austin, TX, April 1990.
- [245] Toronto Area ACM SIGGRAPH Monthly Meeting, University of Toronto, Toronto, ON, July 1990.
- [246] University of California, Computer and Information Sciences Department, Santa Cruz, CA, February 1990.
- [247] Harvard University, Division of Applied Sciences, Cambridge, MA, February 1990.
- [248] University of Illinois, Beckman Institute, Urbana–Champaign, IL, February 1990.
- [249] Carnegie–Mellon University, Department of Computer Science, Pittsburgh, PA, November 1989.
- [250] Yale University, Department of Computer Science, New Haven, CT, September 1989.
- [251] MCC Inc., Austin, TX, April 1989.
- [252] University of Texas, Computer and Vision Research Center, Austin, TX, April 1989.
- [253] Hughes Aircraft Company, Santa Barbara Research Center, Goleta, CA, January 1989.
- [254] Hughes Aircraft Company, El Segundo, CA, January 1989.
- [255] Cambridge Research Laboratory, Digital Equipment Corporation, Cambridge, MA, December 1988.
- [256] Department of Computer Science (2 colloquia), University of South Florida, Tampa, FL, December 1988.
- [257] Department of Electrical Engineering, University of Minnesota, Minneapolis, MN, December 1988.
- [258] Department of Computer Science, Stanford University, Stanford, CA, November 1988.
- [259] Schlumberger Austin Systems Center, Austin, TX, November 1988.
- [260] McGill Research Center for Intelligent Machines, McGill University, Montreal, Canada, August 1988.
- [261] Ricoh Corp. R&D Laboratories, Fuchinobe, Japan, July 1988.
- [262] Department of Mechanical Engineering, MIT, Cambridge, MA, June 1988.
- [263] Thinking Machines Inc., Cambridge, MA, June 1988.
- [264] IBM Thomas J. Watson Research Center, Yorktown Heights, NY, June 1988.
- [265] Computation and Neural Systems Department, California Institute of Technology, Pasadena, CA, June 1988.
- [266] Department of Computer Science, University of Hawaii at Manoa, Honolulu, HI, May 1988.
- [267] Bay Area ACM SIGGRAPH Monthly Meeting, Xerox Palo Alto Research Center, Palo Alto, CA, April 1988.
- [268] MIT Media Laboratory, Cambridge, MA, April 1988.
- [269] Department of Computer Science, University of Florida, Gainesville, FL, April 1988.
- [270] Department of Computer Science, University of Toronto, Toronto, ON, Canada, March 1988.
- [271] Department of Computer Science, University of Washington, Seattle, WA, March 1988.
- [272] Department of Electrical Engineering, University of California, Irvine, CA, January 1988.
- [273] Computer Science Division, AT&T Bell Labs, Murray Hill, NJ, December 1987.
- [274] Department of Computer Science, University of California, Santa Barbara, CA, November 1987.
- [275] Computer Science Department, Purdue University, West Lafayette, IN, October 1987.
- [276] Department of Computer Science, University of Wisconsin, Madison, WI, October 1987.
- [277] MIT Artificial Intelligence Lab, Cambridge, MA, October 1987.
- [278] McGill Research Center for Intelligent Machines, McGill University, Montreal, Canada, July 1987.
- [279] Department of Computer Science, University of California, Berkeley, CA, February 1987.
- [280] Space Data and Computing Div., NASA Goddard Space Flight Center, Greenbelt, MD, January 1987.
- [281] Artificial Intelligence Center, SRI International, Menlo Park, CA, September 1986.

- [282] Department of Computer Science, University of California at Berkeley, Berkeley, CA, June 1986
- [283] Department of Electrical Engineering, McGill University, Montreal, Canada, May 1986.
- [284] Department of Computer Science, Stanford University, Stanford, CA, April 1986.
- [285] MIT Artificial Intelligence Laboratory, Cambridge, MA, September 1985.
- [286] Coordinated Science Laboratory, University of Illinois, Urbana–Champaign, IL, July 1985.
- [287] Thinking Machines, Inc., Cambridge, MA, May 1985.
- [288] Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA, March 1985.
- [289] Computer Science Department, Columbia University, New York, NY, February 1985.
- [290] Computer Science Division, AT&T Bell Laboratories, Murray Hill, NJ, November 1984.
- [291] Robotics Institute, Carnegie–Mellon University, Pittsburgh, PA, November 1984.
- [292] System Science Department, Schlumberger-Doll Research, Ridgefield, CT, October 1984.
- [293] Center for Automation Research, University of Maryland, College Park, MD, September 1984.
- [294] Artificial Intelligence Center, SRI International, Menlo Park, CA, July 1984.
- [295] Fairchild Laboratory for Artificial Intelligence Research, Palo Alto, CA, July 1984.
- [296] General Motors Research Laboratories, Warren, Michigan, June 1984.
- [297] Department of EECS, University of Michigan, Ann Arbor, Michigan, May 1984.
- [298] New York University, Courant Institute of Mathematical Sciences, New York, NY, April 1984.
- [299] Department of Computer Science, University of Toronto, Toronto, ON, Canada, April 1984.
- [300] MIT Artificial Intelligence Laboratory, Cambridge, MA, November 1982.

## Symposia

- [301] “Deep Learning of Sensorimotor Control in Biomechanical Virtual Humans,” delivered at the *9th Annual Symposium of the PKU-UCLA Joint Research Institute in Science and Engineering*, UCLA, Los Angeles, CA, October 2018.
- [302] “Linear and Multilinear PCA for Automatic Brain Image Segmentation,” delivered at the *Conference on What can Computer Vision Do For Neuroscience and Vice Versa?*, Howard Hughes Medical Institute, Janelia Farm Research Campus, Ashburn, VA, November 2010.
- [303] “Human Simulation and Computer Vision,” delivered at the *Sir J. Michael Brady Research Symposium*, Department of Engineering Science, Oxford University, Oxford, England, September 2010.
- [304] “Biomechanical and Artificial Life Simulation of Humans,” delivered at the *Symposium on Applications of Computer Graphics, Computer Vision, and Image Processing*, Graduate School in Mathematics and Computing, Uppsala University, Uppsala, Sweden, May 2010.
- [305] “Human modeling and simulation,” Luncheon Speech delivered at the *Wireless Internet for the Mobile Enterprise Consortium (WINMEC), Mobile Experience 2.0 Forum*, Los Angeles, CA, May 2009.
- [306] “Artificial Life and Biomechanical Simulation of Humans,” delivered at the *2009 Digital Human Symposium (DHS 09)*, Digital Human Research Center, Tokyo, Japan, March 2009.
- [307] *Conference on Computer Vision for Neuroscience*, Howard Hughes Medical Institute, Ashburn, VA, Sep 2008.
- [308] *Minisymposium on Tensor Algebraic Methods, 2008 SIAM Annual Meeting*, San Diego, CA, July 2008.
- [309] *CVPR 2008 panel on “Future Directions in Computer Vision Research”*, Anchorage, AK, June 2008.
- [310] *Workshop on New Research Topics & App’s in Shape, Solid, & Physical Modeling*, Stony Brook, NY, Jun 2008.
- [311] *Workshop on Spatio-Temporal Image Processing and Visual Surveillance*, Los Angeles, CA, May 2008.
- [312] *Learning Workshop*, Snowbird, UT, April 2008.
- [313] “*IEEE Virtual Reality Workshop on Virtual Cityscapes*,” Reno, NV, March 2008.
- [314] *IPAM Symposium on Surgical Simulation of Soft Tissues*, UCLA, Los Angeles, CA, January 2008.
- [315] *UCLA Computer Science Department, Faculty Retreat*, Los Angeles, CA, October 2007.
- [316] *Life in Motion, Stanford Bio-X Symposium*, Stanford, CA, October 2007.
- [317] *First ACM/IEEE International Conf. on Distributed Smart Cameras (ICDSC’07)*, Vienna, Austria, Sep 2007.
- [318] *A Journey Through Computation*, Oratorio San Filippo Neri, Genova, Italy, June 2007.
- [319] *UCLA Engineering Technology Forum*, UCLA, Los Angeles, CA, May 2007.
- [320] *DARPA Workshop on Exploitation of Persistent Operational Surveillance*, Washington, DC, January 2007.
- [321] *IEEE Workshop on Multimedia Signal Processing (MMSP’06)*, Victoria, US BC, October 2006.
- [322] *6th Workshop on Mathematics and Image Analysis (MIA 06)*, Paris, France, September 2006.
- [323] *DARPA Virtual Face Workshop*, Arlington, VA, December 2005.



- [324] *Workshop on Learning in Graphics and Vision, NIPS 2004*, Whistler, BC, December 2004.
- [325] *IPAM Multiscale Geometry and Analysis (MGA) Conference*, Lake Arrowhead, CA, December 2004.
- [326] *5th Korea-Israel Bi-National Conference on Geometric Modeling and CG*, Seoul, Korea, October 2004.
- [327] *ICT Workshop on the Frontiers of Facial Animation*, Marina del Rey, CA, August 2004.
- [328] *NYU Leadership Conference*, Villa La Pietra, Florence, Italy, June 2004.
- [329] *CCPP-Courant Workshop on Computational Cosmology and Astrophysics*, New York, NY, November 2003.
- [330] *ACM SIGGRAPH Workshop on Visualization Meets Visual Effects*, Snowbird, Utah, September 2003.
- [331] *DIMACS Workshop on Medical Applications...*, Rutgers University, New Brunswick, NJ, April 2003.
- [332] *The Creative Possibilities and Limits of AI*, Banff Centre for the Arts, Banff, AL, August 2002.
- [333] *Multimodality of Human Communication Conference*, Victoria University, Toronto, ON, May 2002.
- [334] *Effective Design of Game Elements Workshop*, IBM T.J. Watson Research Center, Yorktown, NY, April 2002.
- [335] *Symp. on Nonlinear PDEs in Image Proc., 1st SIAM Conf. on Imaging Science*, Boston, MA, March 2002.
- [336] *First Digital Flaherty*, Troy, NY, November 2001.
- [337] *Workshop on 3D Shape-Based Retrieval and Analysis of 3D Models*, Princeton, NJ, October 2001.
- [338] *CITO Knowledge Network Conference*, Ottawa, Canada, October 2001.
- [339] *Siggraph 01* panel on “Newton’s Nightmare: Reality Meets Faux Physics”, Los Angeles, CA, August 2001.
- [340] *2001 North American Paleontology Convention Symp. on Artificial Life...*, Berkeley, CA, July 2001.
- [341] *Stanford Workshop on Surgery Simulation*, Stanford University, Stanford, CA, June 2001.
- [342] *2000-2001 Program on Math in Multimedia*, IMA, University of Minnesota, Minneapolis, MN, May 2001.
- [343] Panel on “Animation...”, *Convergence of Graphics, Vision, and Video Workshop*, Berkeley, CA, March, 2001.
- [344] *Déambulations 2000*, University of Quebec at Montreal, Montreal, Canada, December 2000.
- [345] *Web3D Consortium Animation Meeting*, New Orleans, LA, July 2000.
- [346] *Joint EU-US Workshop on Research Issues in Motion Planning*, Toulouse, France, June 2000.
- [347] *Third Annual Subtle Technologies Conference*, Toronto, ON, May 2000.
- [348] *Déambulations 99*, Ecole Nationale Supérieure des Mines, Saint-Étienne, France, December 1999.
- [349] *Digital Biota 3 Conference*, San Jose, CA, November 1999.
- [350] *Tokyo ACM SIGGRAPH Conference*, Tokyo, Japan, September 1999.
- [351] *PRECARN-IRIS IX Conference*, Toronto, June 1999.
- [352] *newMedia99 Conference*, Toronto, June 1999.
- [353] *US PHS-OWH/NCI Joint Working Grp on Image Guided Diagnosis & Treatment*, Wash., DC, Apr. 1999.
- [354] *1st International Conf. on Advanced Multimedia Content Processing*, Osaka, Japan, November 1998.
- [355] *International Workshop on Soft Tissue Deformation and Tissue Palpation*, Cambridge, MA, October 1998.
- [356] *Digital Biota 2 Conference*, University of Cambridge, Cambridge, UK, September 1998.
- [357] *Siggraph 98* panel on “Computer Vision in 3D Interactivity”, Orlando, FL, July 1998.
- [358] *ATR Workshop on Virtual Communication Environments*, ATR International, Kyoto, Japan, April 1998.
- [359] *Toron-Nihon '98 Workshop*, University of Toronto, Toronto, ON, March 1998.
- [360] *Digital Biota Conference*, Banff Centre for the Arts, Banff, AL, August 1997.
- [361] *International Conference on Vision and Action*, York University, North York, ON, June 1997.
- [362] *NSF/ARPA Workshop on Machine Perception of Action*, Brewster, MA, May 1997.
- [363] *Lifelike Computer Characters '96 Conference*, Snowbird, Utah, October 1996.
- [364] *International Symposium Info-Tech '96*, Kobe, Japan, October 1996.
- [365] *The Second World Congress of Nonlinear Analysts*, Athens, Greece, July 1996.
- [366] *ATR International Symposium on Art and Science*, ATR International, Kyoto, Japan, May 1996.
- [367] *2nd International Display Workshops*, Hamamatsu, Japan, October 1995.
- [368] *Workshop on Math. Methods in Computer Vision*, The Geometry Center, Univ. of Minnesota, September 1995.
- [369] *First Carleton Symposium on Applications of Computer Science*, Carleton University, Ottawa, ON, April 1995.
- [370] *1995 Workshop on Machines that Learn*, Snowbird, Utah, April 1995.
- [371] *Fifth Eurographics Workshop on Animation and Simulation*, Oslo, Norway, September 1994.
- [372] *Mini-Symposium on 3D Surface Reconstruction*, SRI International, Menlo Park, CA, March 1994.
- [373] *INRIA Journée Analyse/Synthèse D’Images*, Ecole Nationale Supérieure de Télécom., Paris, France, Jan. 1994.
- [374] *1st International Work. on Mobile Multimedia Communications*, Waseda University, Tokyo, Japan, Dec. 1993.
- [375] *ATR Workshop on Virtual Space Teleconferencing*, ATR International, Kyoto, Japan, December 1993.
- [376] *NSF Workshop on Facial Animation*, University of Pennsylvania, Philadelphia, PA, November 1993.
- [377] *Programme on Computer Vision*, Newton Inst. for Math. Sciences, Univ. of Cambridge, UK, July 1993.
- [378] *ISO/IEC JTC1/SC29/WG11 Seminar on MPEG-4*, Columbia University, New York, NY, July 1993.

- [379] *First Hellenic Symposium on Film and Technology*, Athens, Greece, October 1992.
- [380] *Rank Prize Funds Mini-Symposium on Active Vision*, Grasmere, England, September 1991.
- [381] *2nd International Conf. on Industrial & Applied Mathematics*, Washington, DC, July 1991.
- [382] *Annual Meeting of the Canadian Inst. for Advanced Research AIR Program*, Victoria, BC, Canada, June 1991.
- [383] *Computer Animation '91 Conference*, Battelle Institute, Geneva, Switzerland, May 1991.
- [384] *IMPA Workshop on Geometric Modeling*, Rio de Janeiro, Brazil, January 1991.
- [385] *IMPA Workshop on Math. Aspects of Computer Vision and Image Proc.*, Rio de Janeiro, Brazil, Jan. 1990.
- [386] *SIAM Conference on Geometric Design*, Tempe, Arizona, Nov. 1989.
- [387] *NATO Advanced Research Workshop on Multisensor Fusion in Computer Vision*, Grenoble, France, June 1989.
- [388] *CIAR Workshop on Extrastriate Visual Computation*, Montreal, Canada, June 1989.
- [389] *Canadian Inst. for Advanced Research, AIR Annual Meeting*, Whistler, BC, Canada, September 1988.
- [390] *ATR Workshop on Neural Nets and Parallel Distributed Proc.*, ATR International, Osaka, Japan, July 1988.
- [391] *Workshop on Diff. Geom. and Comp. Graph.*, Math. Sciences Research Institute, Berkeley, CA, May 1988.
- [392] *IMAGINA, the 7th International Forum on New Images*, Monte Carlo, Monaco, February 1988.
- [393] *Stockholm Workshop on Computational Vision*, Rosenon, Sweden, August 1987.
- [394] *GE-MIT Cross-Omega Connection Machine Meeting*, Saratoga Springs, NY, September 1985.
- [395] *1985 Stockholm Workshop on Computational Vision*, Rosenon, Sweden, August 1985.
- [396] *Rank Prize Funds Symp. on Control in Visual Processing*, Great Malvern, England, April 1985.
- [397] *1984 National Computer Conference*, Las Vegas, Nevada, July 1984.
- [398] *Reports of Current Research in Computational Vision at MIT*, Endicott House, Dedham, MA, January 1984.
- [399] *DARPA Image Understanding Workshop*, Stanford, CA, September 1982.
- [400] *Workshop on Multiresolution Image Processing and Analysis*, Leesburg, Virginia, July 1982.
- [401] *Reports of Current Research in Computational Vision at MIT*, Endicott House, Dedham, MA, January 1982.

## Lectures

- [402] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, December 2017.
- [403] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, November 2016.
- [404] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, December 2015.
- [405] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, December 2014.
- [406] “Virtually Alive: The Computer Simulation of People,” faculty presentation delivered during Parent’s Weekend at UCLA, October 2014.
- [407] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, October 2013.
- [408] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, October 2012.
- [409] “Multi-Human Simulation: Autonomous Pedestrians,” delivered in the Fiat Lux course *Urban Planning 19, Seminar 1* on “Urban Dynamics: Cities as Complex Adaptive Systems,” UCLA, Los Angeles, CA, May 2012.
- [410] “Multi-Human Simulation: Autonomous Pedestrians,” delivered in the Fiat Lux course *Human Complex Systems 19, Seminar 1* on “Cities as Complex Systems: Urban Dynamics of Society and the Built Environment,” UCLA, Los Angeles, CA, October 2011.
- [411] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, October 2011.
- [412] “Multi-Human Simulation: Autonomous Pedestrians,” delivered in the Fiat Lux course *Human Complex Systems 19, Seminar 2* on “Cities as Complex Systems: Urban Dynamics of Society and the Built Environment,” UCLA, Los Angeles, CA, February 2011.
- [413] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, November 2010.

- [414] “I Am a Computer Graphics Researcher and This is My Story,” delivered in the course CS448X: Math and Computer Science Behind Special Effects, Computer Science Department, Stanford University, Stanford CA, May 2010.
- [415] “Introduction to Computer Graphics and Computer Vision,” delivered in the CS1 Undergraduate Course, Computer Science Department, University of California, Los Angeles, CA, November 2009.
- [416] “Multi-Human Simulation,” delivered in the Fiat Lux course (Human Complex Systems 19, Seminar 1) on “Urban Dynamics: Cities as Self-Organizing Complex Systems,” UCLA, Los Angeles, CA, October 2009.
- [417] UCLA, Computer Science Department, CS1 Undergraduate Course, Los Angeles, CA, November 2008.
- [418] HSSEAS Open House, UCLA Computer Science Department, Los Angeles, CA, April 2008.
- [419] UCLA, Computer Science Department, CS101 Undergraduate Course, Los Angeles, CA, April 2007.
- [420] HSSEAS Open House, UCLA Computer Science Department, Los Angeles, CA, April 2007.
- [421] UCLA Computer Science Department, CS1 Undergraduate Seminar, Los Angeles, CA, November 2006.
- [422] Université Paris Dauphine, CEREMADE, Paris, France, September 2006 (4 lectures).
- [426] *Institute for Pure and Applied Mathematics (IPAM)*, University of California, Los Angeles, CA, July 2005.
- [427] Columbia University, Computer Science Department, New York, NY, February 2005.
- [428] *Eurographics 2003 Conference*, Granada, Spain, September 2003 (3 lectures).
- [431] *16th International Conference on Computer Animation and Social Agents*, New Brunswick, NJ, May 2003.
- [432] Holiday Lecture, Courant Institute of Math Sciences, New York University, New York, NY, December 2002.
- [433] *Eurographics 2002 Conference*, Saarbrucken, Germany, September 2002 (3 lectures).
- [436] *Tenth Portuguese Computer Graphics Conference*, Lisbon, Portugal, October 2001.
- [437] *ACM SIGGRAPH 01 Course on “A Primer on Shapes: Curves and Surfaces,”* August 2001 (2 lectures).
- [439] *Fachhochschule Bonn-Rhein-Sieg Summer School in Canada*, Toronto, ON, July 2001.
- [440] *Game Developers Conference (GDC’01)*, San Jose, CA, March 2001.
- [441] *Game Technology Conference 2001 (GTec’01)*, Hong Kong, China, January 2001.
- [442] *VISIT Summer School and Workshop on Deformable Models*, Gullmarsstrand, Sweden, August 2000.
- [443] *Fachhochschule Bonn-Rhein-Sieg Summer School in Canada*, Toronto, ON, July 2000.
- [444] *4th IEEE EMBS Internat’l Summer School on Biomed. Imaging*, Ile de Berder, France, June 2000 (3 lectures).
- [447] *Game Developers Conference (GDC’00)*, San Jose, CA, March 2000.
- [448] *ACM Symposium on Virtual Reality Software and Technology 98*, Taipei, Taiwan, November 1998.
- [449] *Computing Insights ’98 Workshop*, University of Toronto, Toronto, ON, July 1998.
- [450] MIT, Departments of Ocean Eng. and Civil and Environmental Eng., Cambridge, MA, March 1996.
- [451] Hi-Vision Promotion Center, Tokyo, Japan, October 1995.
- [452] *Pacific Graphics ’95 Conference*, Seoul, Korea, August 1995.
- [453] *ACM SIGGRAPH 95 Course on “Computer Vision for Computer Graphics,”* Los Angeles, CA, August 1995.
- [454] *Computing Insights ’94 Workshop*, University of Toronto, Toronto, ON, July 1994.
- [455] *ACM SIGGRAPH 94 Course on “Computer Vision for Computer Graphics,”* Orlando, FL, July 1994.
- [456] *ACM SIGGRAPH 93 Course on “Advanced Techniques in Human Modeling...,”* August 1993 (4 lectures).
- [460] *ACM SIGGRAPH 92 Course on “Advanced Techniques in Human Modeling...,”* July 1992 (4 lectures).
- [464] Instituto Superior de Ciências do Trabalho e da Empresa, Lisbon, Portugal, November 1991 (3 lectures).
- [467] *SIGGRAPH 91 Course on “Advanced Techniques in Human Modeling...,”* Las Vegas, Aug 1991 (4 lectures).
- [471] Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, May 1991.
- [472] Information Technology Research Center, Toronto, February 1991.
- [473] Instituto de Matemática Pura e Aplicada, Rio de Janeiro, Brazil, January 1991 (2 lectures).
- [475] University of Hawaii, Department of Computer Science, Honolulu, HI, May 1988 (2 lectures).
- [477] Institute for Mathematics and its Applications, Univ. of Minnesota, Minneapolis, MN, August 1987 (4 lectures).
- [481] *ACM SIGGRAPH 87 Course on “Topics in Physically-Based Modeling,”* Anaheim, CA, July 1987.
- [482] Institute for Nonlinear Science, University of California, Berkeley, CA, June 1987 (2 lectures).
- [484] *IGC Intelligent Vision Systems Conference*, Monterey, CA, April 1985.
- [485] *IGC Intelligent Vision Systems Conference*, Boston, MA, November 1984.

## E Additional Service on Thesis Committees

See Page 17 for service on thesis committees of supervised graduate students.

### Current Thesis Committee Service

19. Member, Xu Xie, PhD in progress, CS, UCLA.
18. Member, Hanlin Zhu, PhD in progress, CS, UCLA.
17. Member, Siyuan Huang, PhD in progress, CS, UCLA.
16. Member, Tao Yuan, PhD in progress, Statistics, UCLA.
15. Member, Siyuan Qi, PhD in progress, CS, UCLA.
14. Member, Yixin Zhu, PhD in progress, Statistics, UCLA.
13. Member, Yuanlu Xu, PhD in progress, CS, UCLA. “Analyzing and Reasoning People’s Trajectories, Behaviors, and Interactions in Videos.”
12. Member, Tianmin Shu, PhD in progress, Statistics, UCLA.
11. Member, Yang Liu, PhD in progress, Statistics, UCLA. “Task-Oriented 3D Reconstruction.”
10. Member, Dan Xie, PhD in progress, Statistics, UCLA. “Inferring the Mind of Agents.”
9. Member, Nishant Shukla, PhD in progress, Statistics, UCLA.
8. Member, Ryan Uhlenbrock, PhD in progress, CS, UCLA.
7. Member, Mark Edmonds, PhD in progress, CS, UCLA.
6. Member, Weichao Qiu, PhD in progress, CS, UCLA.
5. Member, Alex Wong, PhD in progress, Statistics, UCLA.
4. Member, Seunghun Yoo, PhD in progress, CS, UCLA.
3. Member, Qi Zhao, PhD in progress, CS, UCLA.
2. Member, Vince Rabsatt, PhD in progress, CS, UCLA.
1. Member, Evan Lloyd, PhD in progress, CS, UCLA.

### Doctoral Thesis Committees

93. Member, James Kubricht, PhD, Psychology, UCLA, 2018.  
“On the Human Capacity for Physical and Analogical Inference.”
92. Member, Hang Qi, PhD, CS, UCLA, 2018.  
“A joint parsing system for visual scene understanding.”
91. Member, Chuyuan Fu, PhD, Mathematics, UCLA, 2018.  
“The material point method for simulating elastoplastic solids.”
90. Member, Pengyuan Du, PhD, CS, UCLA, 2018.  
“Traffic offloading in heterogeneous networks via multipath tcp and mobile cooperation.”
89. Member, Noor Abani, PhD, CS, UCLA, 2018.  
“Private and efficient content retrieval in information-centric networks.”

88. Member, Yang Lu, PhD, Statistics, UCLA, 2017.  
“Coupling and learning hierarchical generative and descriptive models.”
87. Member, Junhua Mao, PhD, Statistics, UCLA, 2017.  
“Multimodal learning for vision and language.”
86. Member, Peng Wang, PhD, Statistics, UCLA, 2017.  
“Joint multiple visual task understanding from a single image via deep learning and conditional random fields.”
85. Member, Zhou Ren, PhD, CS, UCLA, 2016.  
“Joint image-text representation learning.”
84. Member, Seyoung Park, PhD, CS, UCLA, 2016.  
“Attribute grammar model for joint parsing of human attribute, part and pose.”
83. Member, Theodore Gast, PhD, Mathematics, UCLA, 2016.  
“Numerical simulation of elastic, viscoelastic, and granular materials.”
82. Member, Tuan Ve Le, PhD, CS, UCLA, 2016.  
“A secure socially-aware content retrieval framework for delay tolerant networks.”
81. Member, Pengfei Huang, PhD, Computer and Information Science, University of Pennsylvania, 2015.  
“SPREAD: Sound propagation and perception for autonomous agents in dynamic environments.”
80. Member, Liang-Chieh Chen, PhD, Statistics, UCLA, 2015.  
“Learning representations for scene understanding: Epitomes, CRFs, and CNNs.”
79. Member, Yibiao Zhao, PhD, Statistics, UCLA, 2015.  
“A quest for visual commonsense: Scene understanding by functional and physical reasoning.”
78. Member, Chuchu Wu, PhD, CS, UCLA, 2015.  
“Cooperation incentives for wireless networks.”
77. Member, Jason Liu, PhD, CS, UCLA, 2014.  
“Body pressure image analyses: Static, dynamic, and sensing strategies for a pressure sensitive bedsheet.”
76. Member, Yuting Wang, PhD, Mathematics, UCLA, 2014.  
“Virtual node algorithms for simulating and cutting deformable solids.”
75. Member, Brandon Rothrock, PhD, CS, UCLA, 2013.  
“Grammar models for human pose estimation.”
74. Member, Roozbeh Mottaghi, PhD, CS, UCLA, 2013.  
“Towards scene understanding: Object detection, segmentation, and contextual reasoning.”
73. External Examiner, Marco Rucci, PhD, Department of Mathematics, University of Padova, Italy, 2013.  
“Geometric surface processing and virtual modeling.”
72. Member, Jeffrey Hellrung, PhD, Mathematics, UCLA, 2012.  
“On embedded methods for crack propagation, virtual surgery, shattered objects in computer animation, and elliptic partial differential equations.”
71. Member, Taehee Lee, PhD, CS, UCLA, 2012.  
“Template-based descriptors for object detection and tracking.”
70. Member, Sven Mawson, PhD, CS, UCLA, 2011.  
“Experiments in artificial embryogeny: Comparing indirect encoding of neural networks through search-space analysis.”
69. Member, Mingtian Zhao, PhD, Statistics, UCLA, 2011.  
“A statistical and computational theory for the art of painting.”

68. Member, Kamil Wnuk, PhD, CS, UCLA, 2011.  
“Action recognition and tracking through appearance changes.”
67. Member, Zhao Yi, PhD, CS, UCLA, 2011.  
“Registration and segmentation of medical images.”
66. Member, Michalis Raptis, PhD, CS, UCLA, 2011.  
“Understanding the spatio-temporal structure of human actions.”
65. Member, Zhangzhang Si, PhD, Statistics, UCLA, 2011.  
“Learning AND-OR templates for object recognition by information projection.”
64. Member, Mubassir Kapadia, PhD, CS, UCLA, 2011.  
“Authoring and evaluating autonomous virtual human simulations.”
63. Member, Brian Allen, PhD, CS, UCLA, 2011.  
“Precise and compliant control for physically simulated articulated characters.”
62. Member, Aleka McAdams, PhD, Mathematics, UCLA, 2011.  
“Efficient solutions to voxelized discretizations of elliptic problems with applications to physical simulation in visual effects.”
61. Member, Shawn Singh, PhD, CS, UCLA, 2011.  
“Accelerating photon mapping.”
60. Member, Gabriele Nataneli, PhD, CS, UCLA, 2011.  
“A distributed information model for robust and flexible perceptual interfaces.”
59. Member, Teresa Ko, PhD, CS, UCLA, 2010.  
“Finding birds in trees: Building categories from image streams.”
58. Member, Yongning Zhu, PhD, Mathematics, UCLA, 2010.  
“Multigrid methods for solids simulation.”
57. Member, Brian Fulkerson, PhD, CS, UCLA, 2010.  
“Finding categories.”
56. Member, Jake Porway, PhD, Statistics, UCLA, 2010.  
“A hierarchical and contextual model for learning and recognizing highly variant visual categories.”
55. External Examiner, Alexandru Balan, PhD, CS, Brown University, 2010.  
“Detailed human shape and pose from images.”
54. Member, Arthur Choi, PhD, CS, UCLA, 2009.  
“Belief propagation and approximate inference: Compensating for relaxations.”
53. Member, Eagle Jones, PhD, CS, UCLA, 2009.  
“Vision and inertial sensor fusion for navigation.”
52. Member, Matthew Schuerman, PhD, CS, UCLA, 2009.  
“Situation agents: Agent-based externalized steering logic.”
51. Member, Anna Majkowska, PhD, CS, UCLA, 2007.  
“Motion composition for character animation.”
50. Member, Thomas Y. Yeh, PhD, CS, UCLA, 2007.  
“Architectural and algorithmic acceleration of real-time physics simulation in interactive entertainment.”
49. Member, Ari Shapiro, PhD, CS, UCLA, 2007.  
“Motion editing for animated characters.”
48. Reader, Kai Ju Liu, PhD, Mathematics, NYU, 2006.  
“A trainable graph combination scheme for belief propagation.”

47. Rapporteur, Nikos Paragios, Habilitation à Diriger des Recherches en Sciences, Université de Nice, Sophia Antipolis, 2005.  
“Variational and statistical methods in computational vision: Contributions and applications.”
46. Member, Michael Neff, PhD, CS, UofT, 2005.  
“Aesthetic exploration and refinement: A computational framework for expressive character animation.” (winner, Alain Fournier PhD Thesis Award)
45. External Examiner, Gianfranco Doretto, PhD, CS, UCLA, 2004.  
“Dynamic textures: Modeling, learning, synthesis, animation, segmentation, and recognition.”
44. Reader, Jianbo Peng, PhD, CS, NYU, 2004.  
“Thick surfaces: Interactive modeling of topologically complex geometric details.”
43. Member, Chakravarthy Chennubhotla, PhD, CS, UofT, 2004.  
“Spectral methods for multi-scale feature extraction and data clustering.”
42. External Examiner, Ye Duan, PhD, CS, State University of New York at Stony Brook, 2003.  
“Topology adaptive deformable models for visual computing.”
41. Member, Ting-jen Yen, PhD, CS, NYU, 2003.  
“A qualitative profile-based approach to edge detection.”
40. Reader, Henning Biermann, PhD, CS, NYU, 2002.  
“Representing and modifying complex surfaces.”
39. External Examiner, Jinwook Kim, PhD, School of Mechanical and Aerospace Engineering, Seoul National University, 2001.  
“Geometric algorithms and data structures for physics based simulation.”
38. Reader, Aaron Hertzmann, PhD, CS, NYU, 2001.  
“Algorithms for rendering in artistic styles.”
37. Member, Stergios Anastasiadis, PhD, CS, UofT, 2001.  
“Supporting variable bit-rate video streams in a scalable continuous media server.”
36. Member, Victor Ng-Thow-Hing, PhD, CS, UofT, 2000.  
“Anatomically-based models for physical and geometrical reconstruction of humans and other animals.”
35. External Examiner, Yitzhak Alfy, PhD, CS, City University of New York, 2000.  
“New results on monotone cubic splines and hierarchical scattered data interpolation.”
34. Outside Member, David Brogan, PhD, CS, Georgia Institute of Technology, 2000.  
“Levels of detail in the simulation, planning, and control of dynamic characters.”
33. Outside Member, James Davis, PhD, Media Arts and Sciences, MIT Media Lab, 2000.  
“Categorical motion primitives for the description and perception of movement.”
32. Outside Member, James O’Brien, PhD, CS, Georgia Institute of Technology, 2000.  
“Graphical modeling and animation of fracture.”
31. Member, Dimitrios Androustos, PhD, CS, UofT, 1999.  
“Efficient Indexing and Retrieval of Colour Image Data Using a Vector-Based Approach.”
30. External Examiner, Johan Montagnat, PhD in Informatics, University of Nice Sophia-Antipolis, France, 1999.  
“Modèles déformables pour la segmentation et la modélisation d’images médicales 3D et 4D.”
29. Member, Xuan Ju, PhD, CS, UofT, 1999.  
“Estimating image motion in layers.”
28. Rapporteur, Mathieu Desbrun, PhD, Engineering Sciences, Institut National Polytechnique de Grenoble, France, 1997.  
“Modélisation et animation de matériaux hautement déformables.”

27. Member, John Funge, PhD, CS, UofT, 1997.  
“Making them behave: Cognitive models for computer animation.”
26. External Examiner, Radomir Mech, PhD, CS, University of Calgary, 1997.  
“Modeling and simulation of the interaction of plants with the environment using L-systems and their extensions.”
25. External Member, Martin Jagersand, PhD, CS, University of Rochester, 1997.  
“On-line estimation of visual-motor models for robot control and visual simulation”.
24. Member, Yiming Ye, PhD, CS, UofT, 1997.  
“Sensor planning in 3D object search.”
23. External Examiner, Steven Ruuth, PhD, Mathematics, University of British Columbia, October 1996.  
“Diffusion-generated motion by mean curvature.”
22. External member, Harry (Heung-Yeung) Shum, PhD, CS, Carnegie-Mellon University, July 1996.  
“Modeling from reality: Representation and integration.”
21. Member, Gilbert Verghese, PhD, CS, UofT, 1995.  
“Perspective alignment back-projection for real-time monocular three-dimensional model-based computer vision.”
20. Member, Jos Stam, PhD, CS, UofT, 1995.  
“Multi-scale stochastic modeling of complex natural phenomena.”
19. Rapporteur, Laurent Cohen, Habilitation à Diriger des Recherches en Mathématiques Appliquées, Université Paris Dauphine, 1995.  
“Méthodes variationnelles pour le traitement d’images.”
18. External appraiser, Jim X. Chen, PhD, CS, University of Central Florida, 1995.  
“Physically-based modeling and real-time simulation of fluids.”
17. Examineur, Marie-Paule Cani (Gascuel), Habilitation en Informatique, Institut National Polytechnique de Grenoble, France, 1995.  
“Modèles déformables pour l’animation: Modélisation, animation, et contrôle.”
16. External appraiser, Pierre Breton, PhD, EE, McGill University, 1994.  
“Recovering shape from shading and contour.”
15. Member, Michael McCool, PhD, CS, UofT, 1994.  
“Analytic signal processing for computer graphics using multivariate polyhedral splines.”
14. Member, Radford Neal, PhD, CS, UofT, 1994.  
“Bayesian learning for neural networks.”
13. Internal appraiser, Christopher Williams, PhD, CS, UofT, 1994.  
“Combining deformable models and neural networks for handprinted digit recognition.”
12. Chair, Chandrasekhar Kambhmettu, PhD, CSE, University of South Florida, 1994.  
“Nonrigid motion analysis under small deformations.”
11. Internal appraiser, David Wilkes, PhD, CS, UofT, 1994.  
“Active object recognition.”
10. Member, Eyal Shavit, PhD, CS, UofT, 1994.  
“Phase portraits for analyzing visual dynamics.”
9. Member, George Drettakis, PhD, CS, UofT, 1994.  
“Structured sampling and reconstruction of illumination for image synthesis.”
8. Internal appraiser, Michiel van de Panne, PhD, ECE, UofT, 1994.  
“Control techniques for physically-based animation.”



7. Member, Richard Zemel, PhD, CS, UofT, 1993.  
“A minimum description length framework for unsupervised learning.”
6. Member, Niels Lobo, PhD, CS, UofT, 1992.  
“Computing egomotion, shape, and detecting independent motion from image motion.”
5. Member, Sue Becker, PhD, CS, UofT, 1992.  
“An information-theoretic unsupervised learning algorithm for neural nets.”
4. Member, David Fleet, PhD, CS, UofT, 1991.  
“Measurement of image velocity.”
3. Member, Gregory Dudek, PhD, CS, UofT, 1990.  
“Shape representation from curvature.”
2. External examiner, Issac Rudomin, PhD, CS, University of Pennsylvania, 1990.  
“Simulating cloth using a mixed geometric-physical model.”
1. External examiner, David Suter, PhD, CS, La Trobe University, Australia, 1990.  
“Cooperative algorithms in machine vision.”

## Masters Committees

51. Member, Kiran Sivakumar, MS, CS, UCLA, 2018.  
“Method2Vec: Mapping Java methods to vectors for code clone detection.”
50. Member, Sam Amin, MS, CS, UCLA, 2018.  
“OpenMoves: A system for interpreting person-tracking data.”
49. Member, Yian Zhu, MS, CS, UCLA, 2018.  
“Secure computation of distance of two moving objects.”
48. Member, Jianing Liu, MS, CS, UCLA, 2018.  
“IMDB data visualization and analysis.”
47. Member, Yan Yan, MS, CS, UCLA, 2018.  
“Health monitoring system.”
46. Member, Taoran Li, MS, CS, UCLA, 2018.  
“Kaggle competition: Instacard market basket analysis.”
45. Member, Karthik Vemulapalli, MS, CS, UCLA, 2017.  
“Analyzing and predicting streaks in tennis.”
44. Member, Kevin Nguyen, MS, CS, UCLA, 2017.  
“ATP singles match prediction.”
43. Member, Junchi Zhang, MS, CS, UCLA, 2017.  
“A web-based system for collecting and evaluating UCLA capstone project reports.”
42. Member, Mark Edmonds, MS, CS, UCLA, 2017.  
“Learning complex functional manipulations by human demonstration and fluent discovery.”
41. Member, Kristina Harris, MS, CS, UCLA, 2017.  
“A web application for differentiated learning.”
40. Member, Tanaya Mokashi, MS, CS, UCLA, 2017.  
“Extractive text summarization.”
39. Member, Jun Li, MS, CS, UCLA, 2016.  
“A neural network model for photo quality assessment.”

38. Member, Puja Jagani, MS, CS, UCLA, 2016.  
“Sarcasm detection for Twitter.”
37. Member, Justin Morgan, MS, CS, UCLA, 2016.  
“An SDN approach to TCP and MPTCP flow routing.”
36. Member, Samuel Wu, MS, CS, UCLA, 2016.  
“Evolution of reciprocal altruism in animats.”
35. Member, Aravind Ganapathy, MS, CS, UCLA, 2015.  
“Using contact duration for community-based routing in delay tolerant networks.”
34. Member, Jiadi Yang, MS, CS, UCLA, 2015.  
“Dense spatial pyramid mesh warping for registering moving cameras in 3D scene maps.”
33. Member, Siyuan Qi, MS, CS, UCLA, 2015.  
“Analysis by synthesis: 3D image parsing using spatial grammar and Markov chain Monte Carlo.”
32. Member, Alex Wong, MS, CS, UCLA, 2015.  
“One shot learning via compositions of meaningful patches.”
31. Member, Raghav Mehrish, MS, CS, UCLA, 2015.  
“Apptrics: A metrics framework for iOS apps.”
30. Member, James Gomez, MS, CS, UCLA, 2015.  
“Short-read genome resequencer with SNP and indel detection.”
29. Member, Utkarsh Jaiswal, MS, CS, UCLA, 2014.  
“Applications of optical character recognition to guitar tablature.”
28. Member, Mengyi Zhu, MS, CS, UCLA, 2014.  
“Parallel support vector machine on Apache Spark.”
27. Member, Viet Nguyen, MS, CS, UCLA, 2014.  
“Image Dataset Annotation: Semantic segmentation and beyond.”
26. Member, Wenyi Cheng, MS, CS, UCLA, 2014.  
“Content based inter-MANET routing.”
25. Member, Fatemah Abotalaf, MS, CS, UCLA, 2013.  
“Monitoring large scale applications.”
24. Member, Johathan Shih, MS, CS, UCLA, 2013.  
“Application of explicit-state-duration hidden Markov models to action recognition.”
23. Member, David Woo, MS, CS, UCLA, 2012.  
“X10 v1.5 to X10 v2.2.2 translator.”
22. Member, Zev Solomon, MS, CS, UCLA, 2012.  
“A framework for analyzing human mobility in online social networks.”
21. Member, Luis Angel Larios Cardenas, MS, CS, UCLA, 2012.  
“Antarctica: Exploring the MAXON architecture.”
20. Member, Ilya Kaplun, MS, CS, UCLA, 2011.  
“Human activity recognition: An overview of current approaches and techniques.”
19. Member, Hamid Karimi, MS, CS, UCLA, 2011.  
“Steering continuous crowds.”
18. Member, Jonathan Garcia, MS, CS UCLA, 2011.  
“Smoke simulation for computer graphics.”

17. Carson Lee, MS, CS, UCLA, 2010.  
“An exploratory implementation of adaptive frameless rendering in a SIMD raytracing framework.”
16. Member, Vamsi Mannam, MS, CS, UCLA, 2010.  
“Smoke simulation using Navier-Stokes equations.”
15. Member, Penn Tasinga, MS, CS, UCLA, 2010.  
“A survey of graph cut methods in computer vision.”
14. Member, Hsin-Huei (Stella) Cheng, MS, CS, UCLA, 2009.  
“Interactive cloth simulation.”
13. Member, Markus Benz, MS, CS, UCLA, 2009.
12. Member, Peter Dempsey, MS, CS, UCLA, 2009.  
“Machine learning analysis of evolutionary algorithms in animat communication problems.”
11. Member, Ken Arthur, MS, UCLA, 2009.  
“GPU-based cloth simulation and rendering.”
10. Member, Paul Selden, MS, UCLA, 2009.  
“Evolving neural network-controlled predators and prey that use call systems.”
9. Member, Cho-Nan Michael Tsai, MS, CS, UCLA, 2008.  
“A verbal medication order system.”
8. Member, Matthew Gong, MS, CS, UCLA, 2008.  
“Liquid simulation with tetrahedral meshes.”
7. Member, Kamil Wnuk, MS, CS, UCLA, 2007.  
“Learning to recognize object categories from internet image search results.”
6. Member, Derek Chu, MS, CS, UCLA, 2007.  
“An approach to dynamic control.”
5. Member, Benjamin Sunshine-Hill, MS, CS, UCLA, 2006.  
“Photorealistic lighting with offset radiance transfer mapping.”
4. Reader, Dennis Lomas, MS, CS, UofT, 1992.  
“Model-driven object recognition: Complexity issues.”
3. External Reader, Stanley Sclaroff, MS, MIT, 1991.  
“Deformable solids and displacement maps.”
2. Reader, Jos Stam, MS, CS, UofT, 1991.  
“A multiscale stochastic model for computer graphics.”
1. Reader, John Lee, MS, CS, UofT, 1990.  
“Matching range images of human faces.”

## **F Service on Conference and Workshop Program Committees**

*See Page 28 for service in chairing and organizing conferences.*

### **Computer Vision**

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'19), Long Beach, CA, June 2019.

PC Member, Fifteenth European Conference on Computer Vision (ECCV'18), Munich, Germany, September 2018.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'18), Salt Lake City, UT, June 2018.

PC Member, International Symposium on Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (CompIMAGE 18), Cracow, Poland, July 2018.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'17), Honolulu, HI, June 2017.

PC Member, British Machine Vision, Conference (BMVC'17), London, England, September 2017.

PC Member, 13th Asian Conference on Computer Vision (ACCV'16), Taipei, Taiwan, November 2016.

PC Member, International Symposium on Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (CompIMAGE 16), Niagara Falls, NY, September 2016.

PC Member, Fourteenth European Conference on Computer Vision (ECCV'16), Amsterdam, The Netherlands, October 2016.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'16), Las Vegas, NV, June 2016.

PC Member, International Conference on Computer Vision (ICCV'15), Santiago, Chile, December 2015.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'15), Boston, MA, June 2015.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'14), Columbus, OH, June 2014.

PC Member, Thirteenth European Conference on Computer Vision (ECCV'14), Zurich, Switzerland, September 2014.

PC Member, International Conference on Computer Vision (ICCV'09), Kyoto, Japan, September 2009.

PC Member, 6th IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS'09), Genova, Italy, September 2009.

PC Member, Tenth European Conference on Computer Vision (ECCV'08), Marseille, France, October 2008.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'08), Anchorage, AK, June 2008.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'07), Minneapolis, MN, June 2007.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'06), New York, NY, June 2006.

PC Member, Ninth European Conference on Computer Vision (ECCV'06), Graz, Austria, May 2006.

PC Member, Tenth International Conference on Computer Vision (ICCV'05), Beijing, China, October 2005.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'05), San Diego, CA, June 2005.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'04), Washington, DC, June 2004.

PC Member, Ninth International Conference on Computer Vision (ICCV'03), Nice, France, October 2003.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'03), Madison, WI, June 2003.

PC Member, Eighth International Conference on Computer Vision (ICCV'01), Vancouver, BC, July 2001.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'00), Hilton Head, SC, June 2000.

PC Member, International Conference on Computer Vision Theory and Applications (VISAPP 2012), Rome, Italy, February 2012.

Paper Selection Subcommittee Member and PC Member, Seventh International Conference on Computer Vision (ICCV'99), Kerkyra, Greece, September 1999.

PC Member, 2011 Computer Graphics, Visualization, Computer Vision and Image Processing Conference (CGVCVIP'11),

Rome, Italy, July 2011.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'99), Fort Collins, CO, June 1999.

Paper Selection Subcommittee Member and PC Member, Sixth International Conference on Computer Vision (ICCV'98), Bombay, India, January, 1998.

Paper Selection Subcommittee Member and PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'97), San Juan, PR, June 1997.

Paper Selection Subcommittee Member and PC Member, Fifth International Conference on Computer Vision (ICCV'95), Cambridge, MA, June, 1995.

PC Member, Fourth International Conference on Computer Vision (ICCV'93), Berlin, Germany, May 1993.

PC Member, IEEE Conference on Computer Vision and Pattern Recognition (CVPR'91), Hawaii, June 1991.

PC Member, IEEE Conference on Automatic Face and Gesture Recognition (FG 2011), Santa Barbara, CA, March 2011.

PC Member, IEEE Conference on Automatic Face and Gesture Recognition (FG 2008), Amsterdam, The Netherlands, September 2008.

PC Member, Seventh ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 13), Palm Springs, CA, October 2013.

PC Member, Sixth ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 12), Hong Kong, October 2012.

PC Member, Fifth ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 11), Ghent, Belgium, August 2011.

PC Member, Fourth ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 10), Atlanta, GA, August 2010.

PC Member, Third ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 09), Como, Italy, August 2009.

PC Member, Second ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 08), Stanford, CA, September 2008.

PC Member, International Conference on Computer Vision Theory and Applications (VISAPP 12), Rome, Italy, February 2012.

PC Member, IEEE Workshop on Camera Networks and Wide Area Scene Analysis, Colorado Springs, CO, June 2011.

PC Member, Workshop on Intelligent Analysis of Images and Videos, 13th International Conference on Knowledge-Based and Intelligent Information Engineering Systems (KES 09), Santiago, Chile, September 2009.

PC Member, First International Conference on Scale-Space and Variational Methods in Computer Vision (SSVM 07), Ischia, Italy, May 2007.

Scientific Committee Member, Thematic Conference on Computational Vision and Medical Image Processing (VIP-IMAGE 15), Tenerife, Canary Islands, Spain, October 2015.

PC Member, Thematic Conference on Computational Vision and Medical Image Processing (VIPIMAGE 09), Porto, Portugal, October 2009.

PC Member, Thematic Conference on Computational Vision and Medical Image Processing (VIPIMAGE 07), Porto, Portugal, October 2007.

PC Member, First ACM International Workshop on Vision Networks for Behaviour Analysis (VNBA'08), Vancouver, Canada, October 2008.

PC Member, IEEE International Workshop on Modeling People and Human Interaction (PHI'05), Beijing, China, October 2005.

PC Member, Workshop on Interactive Computer Vision (WICV'07), Rio de Janeiro, Brazil, October 2007.

PC Member, IEEE Workshop on Variational and Level Set Methods in Computer Vision, Vancouver, July 2001.

PC Member, IEEE Human Modeling, Analysis and Synthesis Workshop, Hilton Head Island, SC, June 2000.

- PC Member, IEEE Workshop on Multi-View Modeling and Analysis of Visual Scenes, Fort Collins, CO, June 1999.
- PC Member, IEEE Nonrigid and Articulated Motion Workshop, Washington, DC, June 2004.
- PC Member, IEEE Nonrigid and Articulated Motion Workshop, San Juan, PR, June 1997.
- PC Member, IEEE Workshop on Context-Based Vision, Cambridge, MA, June, 1995.
- PC Member, IEEE Computer Society Workshop on Motion of Nonrigid and Articulate Objects, Austin, TX, November 1994.
- PC Member, IEEE Workshop on Visualization and Machine Vision, Seattle, WA, June 1994.
- Member of the Image Analysis PC, Third International Computer Science Conference (ICSC'95), Hong Kong, December 1995.
- PC Member, Tenth International Conference on Articulated Motion and Deformable Objects (AMDO2018), Mallorca, Spain, July 2018.
- PC Member, Ninth International Conference on Articulated Motion and Deformable Objects (AMDO2016), Andratx, Mallorca, Spain, July 2016.
- PC Member, Seventh International Conference on Articulated Motion and Deformable Objects (AMDO2012), Mallorca, Spain, July 2012.
- PC Member, Sixth International Conference on Articulated Motion and Deformable Objects (AMDO2010), Mallorca, Spain, July 2010.
- PC Member, Fifth International Conference on Articulated Motion and Deformable Objects (AMDO2008), Mallorca, Spain, July 2008.
- PC Member, Fourth International Conference on Articulated Motion and Deformable Objects (AMDO2006), Mallorca, Spain, July 2006.
- PC Member, International Symposium on Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (CompIMAGE 10), Buffalo, NY, October 2010.
- PC Member, International Symposium on Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (CompIMAGE 06), Coimbra, Portugal, October 2006.
- PC Member, Third IAPR International Workshop on Articulated Motion and Deformable Objects (AMDO2004), Mallorca, Spain, September 2004.
- PC Member, Second IAPR International Workshop on Articulated Motion and Deformable Objects (AMDO2002), Mallorca, Spain, November 2002.
- PC Member, First IAPR International Workshop on Articulated Motion and Deformable Objects (AMDO2000), Mallorca, Spain, September 2000.
- PC Member, First International Workshop on Applications of Computer Vision in Archeology (ACVA 03), Madison, WI, June 2003.
- PC Member, Second Workshop on Human Motion Understanding, Modeling, Capture and Animation, Rio de Janeiro, Brazil, October 2007.
- Scientific Committee Member, Fifth International Conference on Computer Vision / Computer Graphics Collaboration Techniques and Applications (MIRAGE2011), Paris, October 2011.
- Scientific Committee Member, Fourth International Conference on Computer Vision / Computer Graphics Collaboration Techniques and Applications (MIRAGE2009), Paris, May 2009.

## **Medical Image Analysis**

- International Program Committee Member, 3rd International Congress on Cardiovascular Technologies (CARDIOTECHNIX 2015), Lisbon, Portugal, November 2015.
- International Program Committee Member and Review Committee Member, Ninth IEEE International Symposium on Biomedical Imaging (ISBI 2012), Barcelona, Spain, May 2012.
- International Program Committee Member and Review Committee Member, Eighth IEEE International Symposium

on Biomedical Imaging (ISBI 2011), Chicago, IL, March 2011.

Program Committee Member, 11th IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2010), San Francisco, CA, June 2010.

Program Committee Member, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2009), Miami, FL, June 2009.

International Program Committee Member and Review Committee Member, Sixth IEEE International Symposium on Biomedical Imaging (ISBI 2009), Boston, MA, June 2009.

Program Committee Member, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2008), Anchorage, AK, June 2008.

International Program Committee Member and Review Committee Member, Fifth IEEE International Symposium on Biomedical Imaging (ISBI 2008), Paris, France, May 2008.

International Program Committee Member and Review Committee Member, Fourth IEEE International Symposium on Biomedical Imaging (ISBI 2007), Washington, DC, April 2007.

Scientific Review Committee Member, Ninth International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI'06), Copenhagen, Denmark, October 2006.

Program Committee Member, Third Symposium on Computational Models for Biomedical Simulation (ISBMS'06), Zürich, Switzerland, July, 2006.

Program Committee Member, IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2006), New York, NY, June 2006.

Scientific Review Committee Member, Eighth International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '05), Palm Springs, CA, October 2005.

International Program Committee Member and Review Committee Member, Third IEEE International Symposium On Biomedical Imaging (ISBI 2006), Arlington, VA, April 2006.

Scientific Review Committee Member, Seventh International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '04), St. Malo, France, September 2004.

International Program Committee Member and Review Committee Member, Second IEEE International Symposium On Biomedical Imaging (ISBI 2004), Arlington, VA, April 2004.

Program Committee Member, Workshop on Computer Vision Approaches to Medical Image Analysis and Mathematical Methods in Biomedical Image Analysis (CVAMIA+MMBIA), Prague, Czechoslovakia, May, 2004.

Scientific Review Committee Member, Sixth International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '03), Montreal, Canada, November 2003.

Scientific Committee Member, International Symposium on Surgery Simulation and Soft Tissue Modeling, Juan-Les-Pins, France, June 2003.

PC Member, Fifth International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '02), Tokyo, Japan, September 2002.

International Review Committee Member, First IEEE International Symposium On Biomedical Imaging (ISBI 2002), Washington, DC, July 2002.

PC Member, Fourth International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '01), Utrecht, The Netherlands, October 2001.

PC Member, Fifth IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2001), Kauai, HI, December 2001.

PC Member, Fourth IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA 2000), Hilton Head, SC, June 2000.

PC Member, Second International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '99), Cambridge, England, June 1999.

PC Member and Session Chair, First International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI '98), Boston, MA, October 1998.

PC Member, First Joint Conference on Computer Vision, Virtual Reality, and Robotics in Medicine (CVRMed '97) and Medical Robotics and Computer Assisted Surgery (MRCAS '97), Grenoble, France, March, 1997.

PC Member, First International Conference on Computer Vision, Virtual Reality, and Robotics in Medicine (CVRMed'95), Nice, France, April 1995.

PC Member, Second IEEE Workshop on Mathematical Methods in Biomedical Image Analysis, San Francisco, CA, June 1996.

PC Member, First IEEE Workshop on Biomedical Image Analysis, Seattle, WA, June 1994.

PC Member, International Workshop on Deformable Modeling and Soft Tissue Simulation, Bonn-Rottgen, Germany, November 2001.

PC Member, International Workshop on Soft Tissue Deformation and Tissue Palpation, Cambridge, MA, October 1998.

## **Computer Graphics**

Member of Papers PC, ACM SIGGRAPH 01, Los Angeles, CA, August 2001; and Chair of Session on “Natural Animation”.

Member of Papers PC, ACM SIGGRAPH 98, Orlando, FL, August 1998.

Member of Papers PC, ACM SIGGRAPH 97, Los Angeles, August 1997; and Chair of Session on “Texture, Reflection, and Designs”.

Member of the International Program Committee and Session Chair of “Deformations (SP6)” session and “Faces and Speech (FP17)” session, Eurographics 2003 Conference, Granada, Spain, September 2003.

Member of the International Program Committee, Eurographics 2002 Conference, Saarbruecken, Germany, September 2002.

Technical PC Member, Eurographics '96 Conference, Poitiers, France, August 1996.

PC Member, Graphics Interface '96, Toronto, ON, May 1996.

PC Member, Graphics Interface '92, Vancouver, BC, May 1992.

PC Member, Computer Graphics International Conference 2007 (CGI '07), Petropolis, Brazil, May 2007.

PC Member, Computer Graphics International Conference 2006 (CGI '06), Hangzhou, China, June 2006.

PC Member, Computer Graphics International Conference 2005 (CGI '05), Stony Brook, NY, June 2005.

PC Member, Computer Graphics International Conference 2004 (CGI '04), Hersonissos, Crete, Greece, 2004.

PC Member, Computer Graphics International Conference 2003 (CGI '03), Tokyo, Japan, July 2003.

PC Member, Computer Graphics International Conference 2002 (CGI '02), Bradford, UK, July 2002.

PC Member, Computer Graphics International Conference 2001 (CGI '01), Hong Kong, China, July 2001.

PC Member, Computer Graphics International Conference 2000 (CGI '00), Geneva, Switzerland, June 2000.

PC Member, Computer Graphics International Conference '99 (CGI '99), Canmore, BC, Canada, June 1999.

PC Member, Computer Graphics International Conference '98 (CGI '98), Hannover, Germany, June 1998.

PC Member, Computer Graphics International '96 (CGI '96), Pohang, Korea, August 1996.

PC Member, Pacific Conference on Computer Graphics and Applications (Pacific Graphics '07), Maui, HI, October 2007.

PC Member, Pacific Conference on Computer Graphics and Applications (Pacific Graphics '05), Macao, China, October, 2005.

PC Member, Pacific Conference on Computer Graphics and Applications (Pacific Graphics '02), Beijing, China, October, 2002.

PC Member, Seventh Pacific Conference on Computer Graphics and Applications (Pacific Graphics '99), Seoul, Korea, October, 1999.

PC Member, Sixth Pacific Conference on Computer Graphics and Applications (Pacific Graphics '98), Singapore,



October 1998.

PC Member, Fifth Pacific Conference on Computer Graphics and Applications (Pacific Graphics '97), Seoul, Korea, October, 1997.

PC Member, Third Pacific Conference on Computer Graphics and Applications (Pacific Graphics '95), Seoul, Korea, August 1995.

PC Member, Tenth International Conference on Computer-Aided Design and Computer Graphics (CAD/Graphics 2007), Beijing, China, October 2007.

PC Member, Computer Animation and Social Agents 2004 (CASA'04) Conference, Geneva, Switzerland, May 2004.

PC Member, Computer Animation and Social Agents 2003 (CASA'03) Conference, New Brunswick, NJ, May 2003.

PC Member, Computer Animation 2002 Conference, Geneva, Switzerland, June 2002.

PC Member, Thirteenth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'14), Copenhagen, Denmark, July 2014.

PC Member, Eleventh ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'12), Lausanne, Switzerland, July 2012.

PC Member, Tenth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'11), Vancouver, BC, August 2011.

PC Member, Ninth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'10), Madrid, Spain, July 2010.

PC Member, Eighth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'09), New Orleans, LA, August 2009.

PC Member, Seventh ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'08), Dublin, Ireland, July 2008.

PC Member, Sixth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'07), San Diego, CA, August 2007.

PC Member and Session Chair ("Controlling Simulations"), Fifth ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'06), Vienna, Austria, August 2006.

PC Member, Third ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'04), Grenoble, France, August 2004.

PC Member, Second ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA'03), San Diego, CA, July 2003.

PC Member, First ACM SIGGRAPH Symposium on Computer Animation (SCA'02), San Antonio, TX, July 2002.

PC Member, Computer Animation 2001 Conference, Seoul, Korea, November 2001.

PC Member, Computer Animation 2000 Conference, Philadelphia, PA, May 2000.

PC Member, Computer Animation '99 Conference, Geneva, Switzerland, May 1999.

PC Member and Session Chair, Computer Animation '98 Conference, Philadelphia, PA, June 1998.

PC Member, Computer Animation '97 Conference, Geneva, Switzerland, June 1997.

PC Member, Computer Animation '96 Conference, Geneva, Switzerland, June 1996.

PC Member, Computer Animation '95 Conference, Geneva, Switzerland, April 1995.

PC Member, Computer Animation '94 Conference, Geneva, Switzerland, May 1994.

PC Member, Computer Animation '93 Conference, Geneva, Switzerland, June 1993.

PC Member, Computer Animation '92 Conference, Geneva, Switzerland, May 1992.

PC Member, Computer Animation '91 Conference, Geneva, Switzerland, May 1991.

PC Member, Third ACM SIGGRAPH International Conference on Motion in Games (MIG 2010), Zeist, The Netherlands, November 2010.

PC Member, First International Workshop on Crowd Simulation (VCROWDS'05), Lausanne, Switzerland, November

2005.

PC Member, 3rd International Conference on Visual Computing (VISUAL-2000), Mexico City, Mexico, September 2000.

PC Member, 8th Eurographics Workshop on Animation and Simulation, Budapest, Hungary, September 1997.

PC Member, 7th Eurographics Workshop on Animation and Simulation, Poitiers, France, August 1996.

PC Member, 5th Eurographics Workshop on Animation and Simulation, Oslo, Norway, November 1994.

Member of the Computer Graphics PC, Third International Computer Science Conference (ICSC'95), Hong Kong, December 1995.

## **Multimedia and Virtual Reality**

PC Member, Eleventh International Conference on Intelligent Virtual Agents (IVA'2011), Reykjavik, Iceland, September 2011.

PC Member, IADIS Multi Conference on Computer Science and Information Systems 2010—Web Virtual Reality and Three-Dimensional Worlds 2010 (WEB3DW2010), Freiburg, Germany, July 2010.

PC Member, Tenth International Conference on Intelligent Virtual Agents (IVA'2010), Philadelphia, PA, September 2010.

PC Member, Electronic Imaging, the Visual Arts & Beyond (EVA 2008), Vienna, Austria, August 2008.

PC Member, 4th International Workshop on the Tangible Space Initiative (TSI 2007), Nara, Japan, November 2007.

PC Member, Electronic Imaging, the Visual Arts & Beyond (EVA 2006 Vienna), Vienna, Austria, August 2006.

PC Member, 3rd International Workshop on the Tangible Space Initiative (TSI 2006), Dublin, Ireland, May 2006.

PC Member, Sixth International Conference on Intelligent Virtual Agents (IVA'2006), Marina Del Rey, CA, August 2006.

PC Member, IFIP 4th International Conference on Entertainment Computing (ICEC 2005), Sanda, Japan, September 2005.

PC Member, Fifth Conference on Intelligent Virtual Agents (IVA'2005), Kos, Greece, September 2005.

PC Member, Third Conference on Intelligent Virtual Agents (IVA'2003), Klosee Irsee, Germany, September 2003.

IPC member, First International Conference of Cyberworlds (CW2003), Singapore, December 2003.

PC Member, 1st International Workshop on Interactive Rich Media Content Production: Architectures, Technologies, Applications, Tools (RICHMEDIA 03), Lausanne, Switzerland, October 2003.

PC Member, Second Conference on Intelligent Virtual Agents (IVA'2001), Madrid, Spain, September 2001.

PC Member, First International Game Technology Conference and IDEA Expo (GTEC'01), Hong Kong, China, January 2001.

PC Member, First International Conference on Virtual Worlds (VW'98), Paris, France, July 1998.

PC Member, Workshop on Modelling and Motion Capture Techniques for Virtual Environments (CapTech98), Geneva, Switzerland, November 1998.

PC Member, First International Conference on Advanced Multimedia Content Processing (AMCP'98), Osaka, Japan, November 1998.

PC Member, International Conference on Virtual Systems and MultiMedia '97, Geneva, Switzerland, September 1997.

## **Geometric Modeling**

PC Member, International Conference on Shape Modeling and Applications (SMI'06), Sendai, Japan, June 2006.

PC Member, International Conference on Shape Modeling and Applications (SMI'05), Cambridge, MA, June 2005.

PC Member, Geometric Modeling and Processing 2004 (GMP'04), Beijing, China, April 2004.

PC Member, Fourth International Conference on 3D Digital Imaging and Modeling (3DIM'03), Banff, AL, October

2003.

PC Member, Geometric Modeling and Processing 2002 (GMP'02), Tokyo, Japan, July 2002.

PC Member, Geometric Modeling and Processing 2000 (GMP'00), Hong Kong, China, April 2000.

PC Member, Second International Conference on 3D Digital Imaging and Modeling (3DIM'99), Ottawa, ON, October 1999.

PC Member, Fourth International Workshop on Implicit Surfaces, Bordeaux, France, September 1999.

## **Artificial Intelligence, Artificial Life**

PC Member, 1st International Workshop on Artificial Intelligence in Machine Vision and Graphics (AIMaVIG'15), Lodz, Poland, September 2015.

PC Member, Mexican International Conference on Artificial Intelligence (MICAI'2006), Mexico, November 2006.

PC Member, Mexican International Conference on Artificial Intelligence (MICAI'2005), Monterrey, Mexico, March 2005.

PC Member, Mexican International Conference on Artificial Intelligence (MICAI'2004), Mexico City, Mexico, March 2004.

PC Member, Mexican International Conference on Artificial Intelligence (MICAI'2002), Yucatan, Mexico, April 2002.

PC Member, Second Asia-Pacific Conference on Intelligent Agent Technology (IAT'01), Maebashi City, Japan, October 2001.

PC Member, 2000 Genetic and Evolutionary Computation Conference (GECCO'00), Las Vegas, NV, July 2000.

PC Member, 1999 Genetic and Evolutionary Computation Conference (GECCO'99), Orlando, FL, July 1999.

PC Member, National Conference on Artificial Intelligence (AAAI '96), Portland, OR, August 1996.

PC Member, 6th National Conference on Artificial Intelligence (AAAI '87), Seattle, WA, July 1987.

## **Other**

PC Member, 24th International Conference on Pattern Recognition (ICPR'18), Beijing, China, August 2018.

PC Member, 23rd International Conference on Pattern Recognition (ICPR'16), Cancun, Mexico, December 2016.

PC Member, 22nd International Conference on Pattern Recognition (ICPR'14), Stockholm, Sweden, August 2014.

PC Member, 21st International Conference on Pattern Recognition (ICPR'12), Tsukuba Science City, Japan, November 2012.

PC Member, International Conference on Imaging Theory and Applications (IMAGAPP'11), Algarve, Portugal, March 2011.

PC Member 20th International Conference on Pattern Recognition (ICPR'10), Istanbul, Turkey, August 2010.

PC Member, European Conference on the Applications of Evolutionary Computation (EvoIASP 2010), Istanbul, Turkey, April 2010.

PC Member, 19th International Conference on Pattern Recognition (ICPR'08), Tampa, FL, December 2008.

PC Member, International Conference on Electronic Imaging and the Visual Arts (EVA 2006), Vienna, Austria, August 2006.

PC Member, IEEE International Conference on Image Processing (ICIP'06), Atlanta, GA, October 2006.

PC Member, IEEE International Conference on Image Processing (ICIP'05), Genova, Italy, September 2005.

PC Member, International Conference on Pattern Recognition (ICPR'02), Quebec City, August 2002.

Scientific Committee Member, Symposium on Digital Earth Moving 2001 (DEM2001), Manno, Switzerland, September 2001.

Scientific Committee Member, 12th International Conference on Analysis and Optimization of Systems (Images,

Wavelets, and PDEs), Paris, France, June 1996.

PC Member, Workshop on Computer Graphics Technology for the Exploration of the Sea (CES'95), Rostock, Germany, May 1995.

PC Member, SPIE Conference on Sensor Fusion and Aerospace Applications, Orlando, FL, April 1993.

## G Refereeing

### Funding Agency Refereeing

Natural Sciences and Engineering Research Council of Canada Grant Proposals  
 NSERC Women Faculty Awards  
 US Advanced Research Projects Agency  
 US National Institutes of Health  
 US National Science Foundation Grant Proposals  
 US Office of Naval Research Program Grant Proposals  
 UK Engineering and Physical Sciences Research Council  
 Fonds FCAR (Quebec) Grant Proposals  
 John Simon Guggenheim Memorial Foundation  
 NATO International Scientific Exchange Programmes Collaborative Research Grant Proposal  
 Information Technology Research Center of Ontario  
 Israel Academy of Sciences and Humanities Basic Research Foundation Grant Proposals  
 Australian Research Council Grant Proposal  
 Austrian Science Fund (FWF)  
 University of California MICRO Program Grant Proposal  
 Hong Kong Research Grants Council  
 Simon Fraser University Center for Systems Science  
 Swedish Research Council for Engineering Sciences  
 Swiss National Science Foundation  
 The Royal Society of New Zealand, Marsden Fund Research Corporation  
 The Wall Institute, University of British Columbia, Canada

### Journal Refereeing

ACM Computing Surveys  
 ACM Transactions on Graphics  
 ACM Transactions on Sensor Networks  
 Applied and Computational Harmonic Analysis  
 Artificial Intelligence  
 Artificial Life  
 ASME Journal of Mechanical Design  
 ASME Journal of Manufacturing Science and Engineering  
 Communications of the ACM  
 Computer Graphics Forum  
 Computer Methods and Programs in Biomedicine  
 Computer Vision Graphics, and Image Processing  
 Computer-Aided Design  
 Computer-Aided Geometric Design  
 Computers & Graphics  
 CVGIP: Graphical Models and Image Processing  
 CVGIP: Image Understanding  
 IEEE Computer Graphics and Applications  
 IEEE Multimedia  
 IEEE Transactions on Aerospace and Electronic Systems  
 IEEE Transactions on Automation Science and Engineering  
 IEEE Transactions on Circuits and Systems for Video Technology  
 IEEE Transactions on Communications  
 IEEE Transactions on Pattern Analysis and Machine Intelligence  
 IEEE Transactions on Image Processing  
 IEEE Transactions on Information Theory  
 IEEE Transactions on Medical Imaging

IEEE Transactions on Neural Networks and Learning Systems  
 IEEE Transactions on Systems, Man, and Cybernetics  
 IEEE Transactions on Visualization and Computer Graphics  
 IEEE Proceedings – Vision, Image and Signal Processing  
 Image and Vision Computing Journal  
 International Journal of Computer Vision  
 International Journal of Human-Computer Studies  
 International Journal of Image and Vision Computing  
 International Journal of Imaging Systems and Technology  
 International Journal of Robotics Research  
 Journal of Autonomous Agents and Multiagent Systems  
 Journal of Computational Physics  
 Journal of Information Science and Engineering  
 Journal of Mathematical Imaging and Vision  
 Journal of Visual Communication and Image Representation  
 Journal of Visualization and Computer Animation  
 Mathematical Geology  
 Medical Image Analysis  
 Multidimensional Systems and Signal Processing  
 Neural Computation  
 Optical Engineering  
 Parallel Processing Letters  
 Pattern Recognition Letters  
 Physical Review E  
 Proceedings of the IEEE  
 SIAM Journal on Scientific Computing  
 Science  
 Signal Processing  
 The Visual Computer

### **Conference Refereeing (in addition to PC reviewing listed in Appendix F (Page 84))**

ACM SIGGRAPH Papers: SIGGRAPH 14, 13, 12, 11, 10, 09, 08, 07, 06, 05, 04, 03, 02, 00, 99, 96, 95, 94, 93, 92, 91, 90, 89; Courses: SIGGRAPH 06, 05, 04, 03, 92; SIGGRAPH Asia 08  
 ACM Symposium on Interactive 3D Graphics, 98, 03  
 Artificial Life: ALife6 '98  
 Computer Animation: CA'91, 92, 93, 94, 95, 96, 97  
 Computer Graphics International: CGI'91, '92, '93, '95, '97  
 Eurographics: EG'05, 07, 10  
 Genetic and Evolutionary Computation Conference: GECCO'99  
 Graphics Interface: GI'92, 95, 00, 02, 03, 06  
 Hawaii International Conference on System Sciences: HICSS-24'91  
 Interdisciplinary Workshop on Motion, Toronto, Canada, (1983)  
 IEEE Conference on Artificial Intelligence Applications: AIA'87  
 IEEE Conference on Computer Vision and Pattern Recognition: CVPR'85, '91, '92, '97, 99  
 IEEE International Conference on Automatic Face and Gesture Recognition, '04  
 IEEE Conference on Visualization: Vis'96, '97, '00, '01, '04  
 IEEE Nonrigid and Articulated Motion Workshop: '97  
 International Conference on Computer Vision: ICCV'93, '95, '98, '99  
 International Conference on Pattern Recognition: ICPR'90  
 International Joint Conference on Artificial Intelligence: ICJAI'83, '89, '96  
 International Workshop on Visual Form: IWVF'94  
 National Conference on Artificial Intelligence: AAAI'86, '87  
 Pacific Graphics: PG'93, '94, '95, '97  
 Annual Symposium on User Interface Software and Technology: UIST'92

## **Manuscript Refereeing**

Morgan-Kaufmann (1991, 1998)

IEEE Press (1993)

Springer-Verlag (2015, 2008, 1997)