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Computer Science & Engineering
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EDUCATION

Stanford University

M.S., Electrical Engineering, June, 1984.

Ph.D., Electrical Engineering, December, 1989.

Dissertation: *Object Classes and Image Contours in Model-Based Vision*.

Advisor: Thomas O. Binford.

Princeton University

B.S.E., Electrical Engineering and Computer Science, June, 1983.

Summa cum laude.

AWARDS AND HONORS

Willett Faculty Scholar Award, 2002.

Best Paper Award, European Conference on Computer Vision, 1998.

Best Paper Award, IEEE Conference on Computer Vision and Pattern Recognition, 1996.

Elected Golden Core Member of IEEE Computer Society, 1996.

Semi-finalist for Best Paper Award, 1994 IEEE Conference on Robotics and Automation.

National Science Foundation Young Investigator Award (NYI), 1992.

Hertz Foundation Graduate Fellowship.

Charles Ira Young Award for Electrical Engineering Research at Princeton.

Member of Phi Beta Kappa and Tau Beta Pi.

EXPERIENCE

Full Professor, University of California, San Diego, Computer Science & Engineering, August 2002–present.

President, Dr. David Kriegman & Associates, consulting, 1996–present.

Associate Professor, University of Illinois, Urbana-Champaign, Computer Science Department, Beckman Institute, August 1998 – August, 2002

Associate Professor, Yale University, Departments of Electrical Engineering and Computer Science, Center for Systems Science, Center for Computational Vision and Control, July 1994 – August 1998.

Assistant Professor, Yale University, Departments of Electrical Engineering and Computer Science, Center for Systems Science, January 1990–June 1994.

Visiting Professor, California Institute of Technology, Summer 1993, Spring 1994.

Research Assistant, Stanford University, Robotics Laboratory, 1985–1989.

Visiting Scientist, MIT Artificial Intelligence Laboratory, Summer 1984.

Technical Associate, Bell Laboratories, Digital Signal Processing Group of the Specialized Processor Hardware Department, Summers 1981, 1982.

PROFESSIONAL ACTIVITIES

Associate Editor-in-Chief: IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001 – present

Associate Editor: IEEE Transactions on Robotics, 2003 – present.

Associate Editor: IEEE Transactions on Robotics and Automation, 2000 – 2003.

Associate Editor: IEEE Transactions on Pattern Analysis and Machine Intelligence, 1997 – 2000.

Guest Editor: Computer Vision and Image Understanding, Special Issue on Face Recognition, 2003.

General Chair: IEEE Conference on Computer Vision & Pattern Recognition, 2005.

Co-chair: IEEE Workshop on Integration of Appearance & Geometric Methods in Object Recognition, 1999.
Block Island Workshop on Vision and Control, 1997.

Program Chair: IEEE Conference on Computer Vision and Pattern Recognition, 2000.

Program Area Chair: IEEE Conference on Computer Vision and Pattern Recognition, 1999, 2001, 2003.

Program Committee: European Conference on Computer Vision, 2004.
Computer Vision & Pattern Recognition for Human Computer Interaction, 2003.
Computer Vision & Pattern Recognition for Human Computer Interaction Workshop 2003.
International Conference on Pattern Recognition (ICPR) 2002, 2004
IMA Conference on the Mathematics of Surfaces, 2000, 2003.
IEEE Conference on Face and Gesture Recognition (FG) 2002.
International Conference Robotics and Automation (ICRA) 2001.
IEEE Workshop on Identifying Objects Across Variations in
Lighting: Psychophysics & Computation, 2001.
IEEE Workshop on Models versus Exemplars in Computer Vision, 2001.
International Conference on Computer Vision (ICCV) 1995, 1999, 2001, 2003.
Workshop on the Algorithmic Foundations of Robotics (WAFR) 2000.
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 1997, 1998.
American Association for Artificial Intelligence (AAAI) 1996.
Intelligent Robots and Systems Conf. (IROS), 1994.

National Science Foundation Robotics Council: Member

NSF Panels (1993-2002)- Ten panels including
Small Business Innovation Research (SBIR).
Grant Review.
Research Initiation Awards (RIA).
CAREER.
ITR
Research Experience for Undergraduates (REU).

National Institutes of Health, NIGMS Special Emphasis Panel, 2002.

Reviewer: Algorithmica, ACM Transactions on Graphics, Artificial Intelligence Journal, ASME Journal of Engineering for Industry, SIGGRAPH, IEEE/ASME Transactions on Mechatronics, Computer Vision, Graphics and Image Processing/ CVIU, Discrete and Computational Geometry, IEE Proceedings – Vision, Image and Signal Processing IEEE Computer Magazine, IEEE Control Systems Magazine, IEEE Trans. Image Processing, IEEE Trans. on Robotics and Automation, IEEE Trans. on Pattern Analysis and Machine Intelligence, IEEE Trans. on Systems, Man, and Cybernetics, Image and Vision Computing, International Journal of Computer Vision, Int. Journal of Computational Geometry and Applications, International Journal of Robotics Research, International Symposium on Wearable Computers (ISWC), Journal of the Optical Society of America - A, Journal of Structural Biology, Pattern Recognition Letters, Vision Research, IEEE Conf. on Robotics and Automation, IEEE Conf. on Computer Vision and Pattern Recognition, IEEE Workshop on Visual Motion, International Conference on Computer Vision, International Joint Conf. on Artificial Intelligence, Army Research Office, Brazilian Government (FAPESP), Ecole Polytechnique Federale De Lausanne, Israel Science Foundation,

National Science Foundation, National Sciences and Engineering Research Council of Canada, United States-Israel Binational Science Foundation, UK Economic & Social Research Council.

Senior Member IEEE, Member ACM.

GRANTS

1. **IGERT: Vision and Learning in Humans and Machines**, G. Cottrell, G. Boynton, V. de Sa, K. Dobkins, D. Kriegman, NSF, \$3,654,144.
2. **FWGrid: A Research Infrastructure with Fast Wireless, Wired, Compute, and Data Infrastructure for Next Generation Systems and Applications**, A. Chien, D. Kriegman, J. Pasquale, S. Savage, NSF Infrastructure Grant, 9/03–8/08, \$1,800,000.
3. **Modeling, Tracking and Recognizing Faces in Video Sequences**, D. Kriegman, Honda Research Institute and U.C. MICRO Program, 102,0007/21/03-12/31/04, \$102,000.
4. **Complex Reflectance, Texture and Shape: Methods and Representations for Object Modelling**, P. Belhumeur, D. Kriegman, NSF, 7/1/03-6/30/06, \$439,877.
5. **Instrumentation for Empirical Studies in the Modeling of Visual Appearance**, P. Belhumeur, D. Kriegman, NSF equipment, 9/2002, 3 yrs., \$115,000.
6. **NSF-CONACyT: Collaborative Research on Sensor-Based Robotics**, S. Hutchinson, D. Kriegman, NSF, 3/15/02–2/28/05, \$100,002.
7. **Lighting Priors and Face Recognition**, D. Kriegman, Honda Research, 5/2001, \$15,000.
8. **Active Information Spaces Based on Ubiquitous Computing**, R. Campbell, D. Kriegman, K. Nahrstedt, D. Reed, R. Kravitz, NSF ITR, 9/2000-8/2005, \$3,300,000.
9. **Multimodal Human Computer Interaction: Toward a Proactive Computer**, T. Huang, D. Brown, D. Kriegman, G. McConkie, D. Roth, NSF ITR, 9/2000-8/2005, \$3,152,068.
10. **Complex Interactions with the Visual World: Capturing, Understanding, and Predicting Appearance**, subcontract from Yale under NSF ITR grant, 9/2000-8/2002, \$44,126.
11. **An Integrated System for Molecular Microscopy**, B. Carragher, C. Potter, R. Milligan, D. Kriegman, Z.P. Liang, NIH, 6/00-5/04, \$1,378,628.
12. **New Shape & Reflectance Models for Vision and Image-based Rendering**, D. Kriegman, NSF, 10/2000-6/2003, \$66,000.
13. **An Intelligent Microscope for Transmission Electron Microscopy**, C. Potter, B. Carragher, D. Kriegman, NSF, 10/1/99-9/30/02, \$570,114.
14. **Environment-Independent Perception and Navigation for Tactical Mobile Robots: A Dik-tiometric Approach**, DARPA, PI with G. Hager, D. McDermott, 2 yrs., \$750,000.
15. **Visual Tracking as a Feedback System**, Army Research Office, 3 yrs., Co-PI with G. Hager, \$270,000.
16. **Domain Independent Vision-Based Navigation**, NSF, PI with G. Hager, 1997, 3 yrs., \$418,184.
17. **Next Generation Vision-Based Control System (DURIP)**, Army Research Office, Co-PI with A.S. Morse, G. Hager, \$129,945.

18. **Computational Approaches to Shape Representation and Recognition in Humans and Machines**, Office of Naval Research, PI with M. Tarr (Brown), July 1, 1995, 1 yr, \$158,825.
19. **Modelling and Recognition of Arbitrary Curved Objects from Image Contours**, National Science Foundation, Co-PI with J. Ponce, (U. Illinois), 1993, 3 yrs, Yale component \$150,370.
20. **Computational Approaches to Human Shape Representation**, Office of Naval Research, Co-PI with M. Tarr, 1993, 2 yrs, \$263,606.
21. **NSF Young Investigator Award**, National Science Foundation, 1992–1998, \$500,000.
22. **Practical Algebraic Techniques for Robotics and Computer Vision**, National Science Foundation, Co-PI with J. Ponce and S. Hutchinson (U. Illinois), June 1992, Yale component \$35,639.
23. **Equipment for Empirical Verification of Sensor-Based Decision Making: Representation, Uncertainty, and Action**, National Science Foundation, PI, with G. Hager, 1991, \$40,000.
24. **Representations and Algorithms for Recognizing and Locating Three-Dimensional Objects from Monocular Images**, National Science Foundation, Co-PI with J. Ponce, (U. Illinois), 1991, 2 yrs, Yale component \$145,104.

UNIVERSITY ACTIVITIES

- Instructor (University of California, San Diego):
 CSE291, *Image-based Modeling and Rendering*, 2003.
 CSE190, *Introduction to Computer Vision*, 2003
- Instructor (University of Illinois):
 CS319, *Advanced Topics in Computer Graphics*, 2000.
 CS348, *Introduction to Artificial Intelligence*, 2000, 2001.
 CS443/ECE449 *Computer Vision*, 1999, 2001.
 CS491-KP, *Topics in Computer Vision Seminar*, 2001, 2002.
 CS497DJK, *Pattern and Object Recognition*, 1998, 1999, 2002.
- Instructor (Yale):
 EE411a/CS471a, *An Analytical Introduction to Robotics*, Autumn 1990–1998.
 EE458/EAS892, *Pattern and Object Recognition*, 1995, 1997.
 EE455/CS476, *Computer Vision*, 1997.
 EE348/CS338, *Digital Systems*, 1995, 1996.
 EE325, *Electronic Circuits*, 1993.
 EAS245, *Elementary Electronics*, 1990–92.

UCSD Committees:

- Faculty Recruiting, 2002–2004
- Graduate Committee, 2002–2003, 2003–2004 Vice-Chair

UIUC Committees:

- Beckman Institute Artificial Intelligence Group Leader, 2001–2002.
- Computer Science Advisory Committee (elected), 2000–2002.
- Department Head Search Committee, 2001.
- Faculty Recruiting, 1999–2000, 2001–2002.
- CS Department Artificial Intelligence Area Chair, 2001–2002.
- Graduate Advisor, 2000–2002.
- Publicity Committee, 2000–2001.

Fulton Copp Chair Search Committee, 2001–2002.
Graduate Fellowships, Assistantships, and Admissions, 1998–2000.
Computing and Technology Advisory Committee, 1998–2000.
Siebel Center for Computer Science Building Committee, 2000–2002.

Yale Committees and Activities:

Member: Yale College Course of Studies Committee, 1994–97.
Member: Graduate Admissions Committee, 1991–93, 95–97, 99.
Founding member: Yale Center for Computational Vision and Control.
Developed a new major at Yale: B.S. in Electrical Engineering and Computer Science.
Co-organizer: “Yale Vision Lunch” Seminar Series, 1990–98.
Freshman Advisor, 1991–98.

PATENTS

1. “*Illumination Based Image Synthesis*,” US patent application 60/2149,470 et seq, pending, Nov. 2001.
2. “*A Method of Face Recognition Using Class Specific Linear Projection*,” provisional patent.
3. “*Constructing 3-D Models of Objects From Images with Varying Light Source Positions*,” provisional patent 60/249,470.
4. “*Constructing 3-D Models of Human Faces with the Monitor as a Light Source*,” provisional patent application filed.

Publications

I: BOOKS AND CHAPTERS

1. D. Kriegman, “*Vision Sensors for Robots*,” in **Encyclopedia of Physical Science and Technology**, Academic Press, 3rd edition, Vol. 17, 2002, pp. 475–488.
2. D. Kriegman, G. Hager, A.S. Morse, Editors, **The Confluence of Vision and Control**, LNCIS series, Springer-Verlag, July, 1998.
3. D. Kriegman, P. Belhumeur, A. Georghiadis, “*Representations for Recognition Under Variable Illumination*,” in **Shape, Contour and Grouping in Computer Vision**, D.A. Forsyth, J.L. Mundy, V. Gesu, R. Cipolla (Eds), Springer-Verlag, 1999, pp. 95–131.
4. P. Belhumeur, D. Kriegman, A. Yuille, “*Shadows, Shading, and Projective Geometry*,” in **Shape, Contour and Grouping in Computer Vision**, D.A. Forsyth, J.L. Mundy, V. Gesu, R. Cipolla (Eds), Springer-Verlag, 1999, pp. 132–153.
5. J. Ponce, D. Kriegman, S. Petitjean, S. Sullivan, G. Taubin, B. Vijayakumar, “*Representations and Algorithms for 3D Curved Object Recognition*,” in **Three-Dimensional Object Recognition Systems**, A. Jain and P. Flynn, eds., Elsevier Press, 1993, pp. 327–352.
6. J. Ponce, D. Kriegman, “*Elimination Theory and Computer Vision: Recognition and Positioning of Curved 3D Objects from Range, Intensity, or Contours*,” in **Symbolic and Numerical Computation for Artificial Intelligence**, B. Donald, D. Kapur, J. Mundy, eds., Academic Press, 1992, pp. 123–146.
7. J. Ponce, D. Kriegman, “*Toward 3D Curved Object Recognition from Image Contours*,” in **Geometric Invariance in Computer Vision**, J. Mundy and A. Zisserman, eds., MIT Press, 1992, pp. 408–439.

II: JOURNAL ARTICLES

8. K.C. Lee, J. Ho, D. Kriegman, “*Acquiring Linear Subspaces for Face Recognition under Variable Lighting*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, submitted.
9. S. Mallick, Y. Zhu, D. Kriegman, “*Detecting Particles in Cryo-em Micrographs using Learned Features*,” **Journal of Structural Biology**, accepted, in press.
10. Y. Zhu, B. Carragher, R. Glaeser, D. Fellmann, C. Bajaj, M. Bern, F. Mouch, F. de Haas, R.J. Hall, D. Kriegman, S. Ludtke, S. Mallick, P. Penczek, A. Roseman, F. Sigworth N. Volkman, C. Potter, “*Automatic Particle Selection: Results of a Comparative Study*,” **Journal of Structural Biology**, accepted, in press.
11. A. Sethi, D. Renaudie, D. Kriegman, J. Ponce, “*Curve and Surface Duals and the Recognition of Curved 3D Objects from their Silhouettes*,” **International Journal of Computer Vision**, accepted, in press.
12. Y. Zhu, G. Xu, D. Kriegman, “*A Real-Time Approach to the Spotting, Representation and Recognition of Hand Gestures for Human-Computer Interaction*,” **Computer Vision and Image Understanding**, 85(3), March 2002, pp. 189–208.
13. T. Zickler, P. Belhumeur, D. Kriegman, *Helmholtz Stereopsis: Exploiting Reciprocity for Surface Reconstruction*, **International Journal of Computer Vision**, Invited by guest editors to Special Issue on Multi-view Modeling and Rendering of Visual Scenes,” 49(2), September, 2002, pp. 215–227.
14. M.H. Yang, D. Kriegman, N. Ahuja, “*Detecting Faces in Images: A Survey*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, 24(1), January, 2002, pp. 34–58.
15. M.H. Yang, D. Kriegman, N. Ahuja, “*Face Detection Using Multimodal Density Models*,” **Computer Vision and Image Understanding**, Vol. 84, 2001, pp. 264–284.
16. Y. Zhu, B. Carragher, D. Kriegman, R. Milligan, C. Potter, “*Automated Identification of Filaments in Cryoelectron Microscopy Images*,” **Journal of Structural Biology**, Vol. 135, 2001, pp. 302–312.

17. D. Kriegman, P. Belhumeur, “*What Shadows Reveal About Object Structure*,” **Journal of the Optical Society of America - A**, 18(8), August, 2001, pp. 1804–1813.
18. M.J. Tarr, D. Kriegman, “*What defines a view?*,” **Vision Research**, 41(15), July, 2001, pp. 1981–2004.
19. A. Georgiades, P. Belhumeur, D. Kriegman, “*From Few to Many: Illumination Cone Models for Face Recognition under Variable lighting and Pose*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, June, 2001, 643–660.
20. B. Carragher, N. Kisseberth, D. Kriegman, R. Milligan, C. Potter, J. Pulokas, A. Reilein, “*Leginon: Automated Acquisition of Images from Vitreous Ice Specimens*,” **Journal of Structural Biology**, Vol. 132, pp. 33–45, 2000.
21. P. Belhumeur, D. Kriegman, A. Yuille, “*The Bas-Relief Ambiguity*,” **International Journal of Computer Vision**, 35(1), 1999, pp. 33–44.
22. B. Vijayakumar, D. Kriegman, J. Ponce, “*Invariant-Based Recognition of Complex Curved 3-D Objects from Image Contours*,” **Computer Vision and Image Understanding** (formerly CVGIP and CVGIP:IU), 72(3), Dec. 1998, pp. 287–303.
23. P. Belhumeur, D. Kriegman, “*What is the Set of Images of an Object Under All Possible Lighting Conditions?*,” **International Journal of Computer Vision**, 28(3), 1998, pp. 245–260.
24. C.J. Taylor, D. Kriegman, “*Vision-Based Motion Planning and Exploration for Mobile Robots*,” **IEEE Transactions on Robotics and Automation**, 14(3), June 1998, 417–426.
25. D. Kriegman, “*Let Them Fall Where They May: Capture Regions of Curved Objects and Polyhedra*,” **International Journal of Robotics Research**, 16(4), Aug. 1997, pp. 448–472.
26. P. Belhumeur, J. Hespanha, D. Kriegman, “*Eigenfaces vs. Fisherfaces: Recognition Using Class Specific Linear Projection*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, Special issue on face recognition, July 1997, pp. 711–720.
27. T. Joshi, B. Vijayakumar, D. Kriegman, J. Ponce, “*HOT Curves for Modelling and Recognition of Smooth Curved 3D Shapes*,” **Image and Vision Computing**, Invited for Promising Directions Track, 15(7), July 1997, 479–498.
28. A. Rao, D. Kriegman, K. Goldberg, “*Complete Algorithms for Feeding Polyhedral Parts using a Pivoting Gripper*,” **IEEE Transactions on Robotics and Automation**, 12(2), Apr. 1996, pp. 331–342.
29. C.J. Taylor, D. Kriegman, “*Structure and Motion from Line Segments in Multiple Images*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, 17(10), Nov. 1995, pp. 1021–1032.
30. G. Taubin, F. Cukierman, S. Sullivan, J. Ponce, D. Kriegman, “*Parameterized Families of Polynomials for Bounded Algebraic Curve and Surface Fitting*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, 16(3) Mar. 1994, pp. 287–303.
31. S. Petitjean, J. Ponce, D. Kriegman, “*Computing Exact Aspect Graphs of Curved Objects: Algebraic Surfaces*,” **International Journal of Computer Vision**, 9(3) Dec. 1992, pp. 231–255.
32. D. Kriegman, “*Computing Stable Poses of Piecewise Smooth Objects*,” **Computer Vision, Graphics and Image Processing: Image Understanding**, Academic Press, 55(2), Mar. 1992, pp. 109–118.
33. J. Ponce, A. Hoogs, D. Kriegman, “*On Using CAD Models to Compute the Pose of Curved 3D Objects*,” **Computer Vision, Graphics and Image Processing: Image Understanding**, Academic Press, 55(2), Mar. 1992, pp. 184–197.
34. D. Kriegman, J. Ponce, “*On Recognizing and Positioning Curved 3D Objects from Image Contours*,” **IEEE Transactions on Pattern Analysis and Machine Intelligence**, Dec. 1990, pp. 1127–1137. Reprinted in **Automatic Object Recognition, Milestones in Computer Vision series**, Hatem Nasr ed., SPIE, 1992.

35. D. Kriegman, J. Ponce “*Computing Exact Aspect Graphs of Curved Objects: Solids of Revolution,*” **International Journal of Computer Vision**, 5(2) Nov. 1990, pp. 119–136.
36. J. Ponce, D. Kriegman “*An Algebraic Approach to Computer Vision,*” **Revue d’Intelligence Artificielle**, Special Issue on Geometric Reasoning, Dec. 1989, pp. 105–135.
37. D. Kriegman, E. Triendl, T.O. Binford, “*Stereo Vision and Navigation in Buildings for Mobile Robots,*” **IEEE Transactions on Robotics and Automation**, 5(6) Dec. 1989, pp. 792–803. Reprinted in **Autonomous Mobile Robots**, S.S. Iyengar and A. Elfes, eds., IEEE Press, 1991, pp. 332–341.

III. INVITED CONFERENCE PAPERS

38. D. Kriegman, P. Belhumeur, A. Georghiades, “*Shape and Enlightenment: Reconstruction and Recognition under Variable Illumination,*” International Symposium on Robotics Research, October, 1999, pp. 79–88.
39. G. Hager, D. Kriegman, A. Georghiades, O. Ben-Shahar, “*Toward Domain-Independent Navigation: Dynamic Vision and Control*” in special session “*Purposive Vision: the next playground for control theory?*”, **IEEE Conference on Decision and Control**, Tampa, Dec. 1998.
40. D. Kriegman, P. Belhumeur, “*Shape, Illumination and Representation in Computer Vision,*” **International Joint Workshop on Shape, Contour and Grouping**, Palermo, Italy, May 1998.
41. D. Kriegman, J. Ponce, “*Representations for Recognizing Complex Curved 3D Objects,*” presented to the **Workshop on 3D Object Representations in Computer Vision**, 1994 and appeared in **Object Representation in Computer Vision**, Springer, 1995, pp. 125–138.
42. C.J. Taylor, D. Kriegman, “*Vision-Based Motion Planning and Exploration Algorithms for Mobile Robots,*” **The Algorithmic Foundations of Robotics**,” Goldberg, Halperin, Latombe, Wilson, eds., A.K. Peters, Boston, Mass, 1995, pp. 69–84.
43. M. Tarr, D. Kriegman, “*A Formal Basis for Understanding View-based Representations in Humans,*” **Workshop on Visual Perception: Computation and Psychophysics**, Chatham, Mass., 1993 (presentation, no published paper).
44. D. Kriegman, C.J. Taylor, “*Mobile Robot Map Making from Vision and Motion,*” **Allerton Conference on Communication, Control, and Computing**, 1991, pp. 201–210.
45. J. Ponce, D. Kriegman, “*New Progress in Prediction and Interpretation of Line-Drawings of Curved 3D Objects,*” **Proc. Fifth IEEE International Symposium on Intelligent Control**, 1990.
46. D. Kriegman, T.O. Binford, “*Model-based Mobile Robot Perception*” International Advanced Robotics Programme workshop on **Multi-sensor Fusion and Environment Modelling**, Toulouse, France, 1989.
47. D. Kriegman, E. Triendl, T.O. Binford, “*Mobile Robot Planning with Integrated Sensor Input,*” presented to the **IEEE Conference on Decision and Control**, (paper available from authors), Los Angeles, 1987.

IV: CONTRIBUTED CONFERENCE PAPERS

48. M. Koudelka, S. Magda, P. Belhumeur, D. Kriegman, “*Acquisition, Compression, and Synthesis of Bidirectional Texture Functions,*” **IEEE International Workshop on Texture Analysis and Synthesis**, 2003, pp. 59–64.
49. T. Zickler, J. Ho, D. Kriegman, P. Belhumeur, J. Ponce, “*Binocular Helmholtz Stereopsis,*” **International Conference on Computer Vision**, 2003, pp. 1411–1417.
50. S. Magda, D. Kriegman, “*Fast Texture Synthesis on Surfaces,*” **Eurographics Symposium on Rendering**, 2003, pp. 82–89.

51. T. Zickler, P. Belhumeur, D. Kriegman, “*Toward a Stratification of Helmholtz Stereopsis,*” **IEEE Conf. on Computer Vision and Pattern Recognition**, 2003, Vol. I, pp. 548–555.
52. J. Ho, M.H. Yang, J. Lim, K.C. Lee, D. Kriegman, “*Clustering Appearances of Objects Under Varying Illumination Conditions,*” **IEEE Conf. on Computer Vision and Pattern Recognition**, 2003, Vol. I, pp. 11–18.
53. K.C. Lee, J. Ho, M.H. Yang, D. Kriegman, “*Video-Based Face Recognition Using Probabilistic Appearance Manifolds,*” **IEEE Conf. on Computer Vision and Pattern Recognition**, 2003, Vol. I, pp. 313–320.
54. S. Magda, D. Kriegman, “*Fast Texture Synthesis on Arbitrary Meshes,*” **SIGGRAPH Technical Sketch**, 2003.
55. K.H. Tan, N. Ahuja, D. Kriegman, “*Appearance-based Eye Gaze Estimation,*” **IEEE Workshop on the Application of Computer Vision**, 2002, pp. 191–195.
56. T. Zickler, P. Belhumeur, D. Kriegman “*Helmholtz Stereopsis: Exploiting Reciprocity for Surface Reconstruction,*” **European Conference on Computer Vision**, 2002, oral presentation, pp. 869–884.
57. S. Lazebnik, A. Sethi, C. Schmid, D. Kriegman, J. Ponce, M. Hebert, “*On pencils of tangent planes and the recognition of smooth 3D shapes from silhouettes,*” **European Conference on Computer Vision**, 2002, pp. 651–665.
58. K.C. Lee, J. Ho, D. Kriegman, “*Nine Points of Light: Acquiring Subspaces for Face Recognition under Variable Illumination,*” **IEEE Conf. on Computer Vision and Pattern Recognition**, 2001, oral presentation, pp. 519–526.
59. M. Koudelka, S. Magda, P. Belhumeur, D. Kriegman, “*Image-based Modeling and Rendering of Surfaces with Arbitrary BRDFs,*” **IEEE Conf. on Computer Vision and Pattern Recognition**, 2001, oral presentation, pp. 568–575.
60. J. Ho, K.C. Lee, D. Kriegman, “*Compressing Large Polygonal Models,*” **IEEE Visualization**, 2001, pp. 357–362.
61. R. Swain-Oropeza, D. Burschka, D. Kriegman, G. Hager, M. Knapek, “*Selecting Landmarks for a Visual Based Navigation Task,*” **International Symposium on Intelligent Robotic Systems**, Toulouse, 2001.
62. J. Ho, K.C. Lee, D. Kriegman, “*Compressing Large Polygonal Models,*” **SIGGRAPH Technical Sketch**, 2001, p. 159.
63. C.S. Potter, B. Carragher, D. Kriegman, J. Pulokas, “*Automated Very Low Magnification Imaging for TEM,*” **Microscopy and Microanalysis**, 2001, abstract
64. S. Magda, T. Zickler, D. Kriegman, P. Belhumeur, “*Beyond Lambert: Reconstructing Surfaces with Arbitrary BRDFs,*” **International Conference on Computer Vision**, 2001, oral presentation, pp. 391–398.
65. M.H. Yang N. Ahuja, D. Kriegman, “*Face Recognition Using Kernel Eigenfaces,*” **Int. Conf. on Image Processing**, 2000, vol. 1, pp. 37–40.
66. S. Magda, J. Lu, D. Kriegman, P. Belhumeur, “*Shedding Light on Image-Based Rendering,*” **SIGGRAPH Technical Sketch**, 2000, p. 255.
67. B. Carragher, N. Kisseberth, D. Kriegman, R.A. Miligan, C.S. Potter, J. Pulokas, and A. Reilein, “*An Integrated System for Transmission Electron Microscopy,*” **Microscopy and Microanalysis**, 2000, abstract.
68. D. Renaudie, D. Kriegman, J. Ponce, “*Duals, Invariants, and the Recognition of Smooth Objects from their Occluding Contour,*” **European Conference on Computer Vision**, 2000, pp. 1.784–798.
69. A. Georghiades, P. Belhumeur, D. Kriegman, “*From Few to Many: Generative Models for Recognition under Variable Pose and Illumination,*” **IEEE Conf. on Automatic Face and Gesture Recognition**, 2000, pp. 277–284.
70. M.H. Yang, N. Ahuja, D. Kriegman, “*Face Detection using Mixtures of Linear Subspaces,*” **IEEE Conf. on Automatic Face and Gesture Recognition**, 2000, pp. 70–76.

71. M. Knapek, R. Swain, D. Kriegman, “*Selecting Promising Landmarks,*” **IEEE Conf. on Robotics and Automation**, April 2000, pp. 3771-3777.
72. A. Georghiades, P. Belhumeur, D. Kriegman, “*Illumination-Based Image Synthesis: Creating Novel Images of Human Faces Under Differing Pose and Lighting,*” **IEEE Workshop on Multi-View Modeling and Analysis of Visual Scenes**, 1999, pp. 47–54.
73. M.H. Yang, N. Ahuja, D. Kriegman, “*Face Detection Using a Mixture of Factor Analyzers,*” **Int. Conf. on Image Processing**, 1999.
74. A. Sudsang, J. Ponce, M. Hyman, D. Kriegman, “*On Manipulating Polygonal Objects with Three 2-DOF Robots in the Plane,*” **IEEE Conf. on Robotics and Automation**, 1999, pp. 2227-2234.
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¹Best Paper Award, European Conference on Computer Vision, 1998.

²Best Paper Award, IEEE Conference on Computer Vision and Pattern Recognition, 1996.

³Semi-finalist for Best Paper Award, IEEE Conference on Robotics and Automation. 1994.

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SELECTED INVITED COLLOQUIA, SEMINARS, PANELS

1. "Illumination and Reflectance Modeling and Its Application to Face Recognition," Designing Tomorrow's Category-Level 3D Object Recognition Systems: An International Workshop, Sept. 2003.
2. "Detecting Particles in Cryoelectron Micrographs: Lessons from Computer Vision and Pattern Recognition," Multidisciplinary Workshop on Automatic Particle Selection for Cryo-electron Microscopy, April, 2003.
3. Honda Fundamental Research Lab, Mountain View, CA, Oct. 2002.
4. Encuentro Nacional de Computacion (Mexican National Conference on Computer Science), keynote plenary address, Sep. 2001.
5. Beckman Institute Directors Colloquium, "Shape and Enlightenment in Vision and Graphics", Apr. 2001.
6. Purdue University, "Reconstruction and Image-Based Rendering of Surfaces with Arbitrary BRDF," Feb. 2001.
7. Johns Hopkins University, "Shedding Light on Image-Based Rendering," Nov. 2000.
8. "Using Object Recognition to Index Image and Video Libraries Panel," IEEE Workshop on Content-based Access of Image and Video Libraries, June 2000.
9. Expomillennium, San Jose, Costa Rica, "*Robotics at the Threshold of the New Millennium*," Dec. 1999.
10. Microsoft Research Labs, Redmond, Washington, "*Shape and Enlightenment: Recognition, Reconstruction, and Image-based Rendering under Variable Illumination*, August 6, 1999.
11. INRIA Rhone Alpes, Grenoble, France, "*Representations for Recognition Under Variable Illumination*, May 1999.
12. DIMACS Workshop on Large Scale Discrete Optimization in Robotics and Vision, "*Recognition under Variable Illumination: Issues and Problems*, March 22, 1999.
13. DIMACS Workshop on Large Scale Discrete Optimization in Robotics and Vision, *Panel: Vision and Robotics: Growing Apart or Coming Together?*, March 22, 1999.
14. Weizmann Institute, Israel, "*Duals, Invariants, and Motion for Modelling, Recognizing, and Reconstructing Curved 3-D Objects*," March 22, 1998.
15. Technion, Israel, "*Shape and Enlightenment in Vision*," March 17, 1998.
16. Hebrew University, Israel, "*Shape and Enlightenment in Vision*," March 16, 1998.
17. Weizmann Institute, Israel, "*Shape and Enlightenment in Vision*," March 11, 1998.
18. Johns Hopkins University, "*Shape and Enlightenment in Vision*," March 2, 1998.
19. NEC/NYU Vision Workshop, Panel Discussant, February 20, 1998.
20. SRI, "*The Set of Images under All Illumination Conditions and the Generalized Bas-Relief Ambiguity*," January 5, 1998.
21. NYU, "*The Set of Images under All Illumination Conditions and the Generalized Bas-Relief Ambiguity*," November 24, 1997.
22. Yale Science Forum, *Computer Vision and Robotics*, May 3, 1997.
23. Yale Frontiers of Science, *Can Machines See*, April 5, 1997.
24. Rutgers University, "*The Set of Images under All Illumination Conditions and the Generalized Bas-Relief Ambiguity*," March 31, 1997.
25. NEC Research Institute, Princeton, "*Eigenfaces vs. Fisherfaces: Recognition Using Class Specific Linear Projection*," June 3, 1996.
26. Cambridge, England, "*Progress in geometric representations Panel*," in the "Workshop on Object Representation for Computer Vision," April 13, 1996.
27. NEC Research Labs, Princeton, "*An Invariant-Based Representation for Modelling and Recognizing Complex Curved 3-D Objects*," Jan. 22, 1996,
28. University of Pennsylvania, "*An Invariant-Based Representation for Modelling and Recognizing Complex Curved 3-D Objects*," Nov. 17, 1995.

29. Brown University, "*An Invariant-Based Representation for Modelling and Recognizing Complex Curved 3-D Objects*," Nov. 16, 1995.
30. MIT, "*Representing, Modelling, and Recognizing Complex Curved 3D Objects*," May 15, 1995.
31. Caltech, "*Structure from Motion using Line Segments*," April 7, 1994.
32. University of Southern California, "*Computing Capture Regions of Curved Objects*," February 11, 1994.
33. Harvard University, "*Modelling and Recognizing Objects from Images: A Rank Test*," Nov. 5, 1993.
34. University of Illinois, "*Stable Poses and Capture Regions of Curved 3D Objects*," October 15, 1993.
35. University of Southern California, "*Recognizing Curved Objects*," June 7, 1993.
36. University of California Berkeley, "*Toward Vision-Based Mobile Robot Exploration*," March 5, 1993.
37. IBM Watson Research Center, "*Toward 3D Curved Object Recognition from Image Contours*," April 30, 1992.
38. Columbia University, "*Toward 3D Curved Object Recognition from Image Contours*," October 31, 1991.
39. University of South Florida, "*Modelling, Aspect Graphs and Recognition of Curved Objects*," October 14, 1991.
40. David Sarnoff Research Labs, Princeton, NJ, "*Toward 3D Curved Object Recognition*," September 13, 1991.
41. Cal. Tech/JPL, "*Mobile Robots and Curved Object Recognition*," August 29, 1990.
42. Robotics Institute, Carnegie Mellon University, "*An Algebraic Approach to Computer Vision*," May, 1990.
43. University of California, Berkeley, "*Vision-based Navigation within Buildings*," November, 1989.
44. LIFIA, Grenoble, France, "*Mobile Robots and Curved Object Recognition*," October, 1989.