

## CURRICULUM VITAE

### Charles R. Dyer

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#### PERSONAL DATA

Born March 14, 1951, Gilroy, California  
Married, one child  
United States Citizen

#### EDUCATION

1979	Ph.D.	University of Maryland	Computer Science
1974	M.S.	University of California, Los Angeles	Computer Science
1973	B.S.	Stanford University	Mathematical Sciences

#### EXPERIENCE

1988-2005	Professor, Department of Computer Sciences, University of Wisconsin
1999-2000	Professor, International Academic Program at Florence, Italy
1999-	Visiting Fellow, Exeter College, University of Oxford
1990-1993	Professor, Department of Biostatistics and Medical Informatics, University of Wisconsin
1987-1990	Chair, Department of Computer Sciences, University of Wisconsin
1985-1988	Associate Chair, Department of Computer Sciences, University of Wisconsin
1982-1985	Associate Professor, Department of Computer Sciences, University of Wisconsin
1982-1985	Assistant Professor, Department of Computer Sciences, University of Wisconsin

1979-1982 Assistant Professor, Department of Electrical Engineering and Computer Science, University of Illinois at Chicago

## HONORS AND AWARDS

Fellow, Institute of Electrical and Electronics Engineers, 1998  
Fellow, International Association for Pattern Recognition, 2002  
Visiting Fellowship, Exeter College, University of Oxford, 1999-2000  
Best Paper Award, IEEE Computer Vision and Pattern Recognition Conference, 1994  
Research Initiation Award, National Science Foundation, 1983-1985

## RECENT GRANTS

Co-Principal Investigator, *MSPA-MCS: Face Recognition using Integral Invariants and Cryptology*, National Science Foundation, 8/04 – 7/07 (Other Co-PIs: N. Boston and Y-H. Hu)

Trainer, *Computation and Informatics in Biology and Medicine*, National Library of Medicine, 7/02 – 6/07 (PI: G. Phillips)

Investigator, *Diffusion MRI of the Human Brain*, National Institutes of Health, 1/2006 – 6/2009 (PI: A. Alexander)

Investigator, *Pulmonary Benefits of Cystic Fibrosis Neonatal Screening*, National Institutes of Health, 5/2004 – 8/2005 (PI: P. Farrell)

## PATENTS

Photorealistic Scene Reconstruction by Voxel Coloring, with S. M. Seitz, U.S. Patent No. 6,363,170, March 26, 2002

## Ph.D. STUDENTS

Guodong Guo, *Face, Expression, and Iris Recognition using Learning-based Approaches*, 2006

Shaohua Fan, *Sequential Monte Carlo Methods for Physically Based Rendering*, 2006

Russell A. Manning, *Screw-Transform Manifolds for Camera Self Calibration*, 2003

Liang-Yin Yu, *Active 3D Surface Modeling using Perception-Based Differential-Geometric Primitives*, 1999

Gareth S. Bestor, *Recovering Feature and Observer Position by Projected Error Refinement*, 1998

Steven M. Seitz, *Image-Based Transformation of Viewpoint and Scene Appearance*, 1997

William L. Hibbard, *Visualizing Scientific Computations: A System based on Lattice-Structured*

*Data and Display Models*, 1995

Kiriakos N. Kutulakos, *Exploring Three-Dimensional Objects by Controlling the Point of Observation*, 1994

Mark C. Allmen, *Image Sequence Description using Spatiotemporal Flow Curves: Toward Motion-Based Recognition*, 1991

W. Brent Seales, *Appearance Models of Three-Dimensional Shape for Machine Vision and Graphics*, 1991

W. Harry Plantinga, *The Asp: A Continuous, Viewer-Centered Object Representation for Computer Vision*, 1988

Charles V. Stewart, *Connectionist Models of Stereo Vision*, 1988

Bradley P. Kjell, *Oriented Edge Separation Texture Measures*, 1985

## **PROFESSIONAL ACTIVITIES**

### **Editorial Boards**

Associate Editor, IEEE Transactions on Pattern Analysis and Machine Intelligence, 1987-1991

Editorial Board, Journal of Machine Vision and Applications, 1987-1994, 2004-date

Subject Area Editor, Journal of Parallel and Distributed Computing, 1984-1988

### **Professional Societies**

Fellow, Institute of Electrical and Electronics Engineers (IEEE)

Member, International Association for Pattern Recognition (IAPR)

Member, Sigma Xi

### **Professional Committees**

Member, Leadership Committee, UW-Madison Eye Research Institute, 2006-date

Member, UW-Madison Cognitive Science Cluster, 2007-date

Member, Governing Board, International Association for Pattern Recognition (IAPR), 2002-date

Member, IAPR Fellow Committee, 2006-2008

Chair, IEEE Computer Society Technical Committee on Pattern Analysis and Machine Intelligence, 2002-2003

Vice Chair, IEEE Computer Society Technical Committee on Pattern Analysis and Machine Intelligence, 2004-2005

Member, Steering Committee, IEEE Computer Society Technical Committee on Pattern Analysis and Machine Intelligence, 2004-2005

Member, National Science Foundation review panels, 1986-date

Program Committee, 10th European Conference on Computer Vision, 2008

Program Committee, Computer Vision and Pattern Recognition Conference, 2008

Program Committee, SPIE International Symposium on Computer Image Analysis in the Study of Art, 2008

Program Committee, 11th International Conference on Computer Vision, 2007  
 Program Committee, Workshop on Interactive Computer Vision, 2007  
 Program Committee, Computer Vision and Pattern Recognition Conference, 2007  
 Program Committee, 20th International Conference on Intelligent Robots and Systems, 2007  
 Program Committee, IEEE Workshop on Motion and Video Computing, 2007  
 Program Committee, 13th International Conference on Image Processing, 2006  
 Program Committee, 9th European Conference on Computer Vision, 2006  
 Program Committee, International Conference on Image Analysis and Processing, 2005  
 Program Committee, Second IEEE Workshop on Image and Video Registration, 2004  
 Program Committee, 8th European Conference on Computer Vision, 2004  
 Program Committee, 17th International Conference on Pattern Recognition, 2004  
 General Co-Chair, Computer Vision and Pattern Recognition Conference, 2003  
 Program Committee, International Conference on Intelligent Robots and Systems, 2003  
 Program Committee, IEEE International Conference on Image Processing, 2003  
 Program Committee, 12th International Conference on Image Analysis and Processing, 2003  
 Program Committee, Model-based Imaging, Rendering, Analysis and Graphical Effects, 2003  
 Program Committee, IEEE Workshop on Image and Video Registration, 2003  
 Program Committee, Vision and Modeling of Dynamic Scenes Workshop, 2002  
 Program Committee, IEEE Computer Society Bioinformatics Conference, 2002  
 Program Committee, Workshop on Video Registration, 2001  
 Program Committee, 2nd Workshop on 3D Structure from Multiple Images of Large-Scale Environments, 2000  
 Workshops Chair, Computer Vision and Pattern Recognition Conference, 1999  
 Program Committee, Workshop on Multi-View Modeling and Analysis of Visual Scenes, 1999  
 Program Committee, 7th International Conference on Computer Vision, 1999  
 Program Committee, 6th International Conference on Computer Vision, 1998  
 Program Committee, 4th Asian Conference on Computer Vision, 1998  
 Program Committee, International Conference on Robotics and Automation, 1997  
 Program Co-Chair, Computer Vision and Pattern Recognition Conference, 1996  
 Program Committee, 2nd International Conference on Image Processing, 1995  
 Program Committee, IEEE Workshop on Computer Vision, 1995  
 Program Committee, International Symposium on Computer Vision, 1995  
 Program Committee, International Computer Science Conference, 1995  
 Member, IEEE Pattern Analysis and Machine Intelligence Advisory Board, 1991-1994  
 Program Committee, 12th International Conference on Pattern Recognition (Computer Vision and Image Processing Conference), 1994  
 Member, National Science Foundation Advisory Committee for the Division of Information, Robotics and Intelligent Systems, 1989-1992 (Chair, 1991-1992)  
 Program Co-Chair, IEEE Workshop on Applications of Computer Vision, 1992  
 Program Committee, Computer Vision and Pattern Recognition Conference, 1992  
 Program Committee, SPIE Conference on Applications of Artificial Intelligence X: Machine Vision and Robotics, 1992  
 Program Committee, IEEE Workshop on Directions in Automated CAD-Based Vision, 1991

Program Committee, 10th International Conference on Pattern Recognition, 1990  
Program Chair, Workshop on Computer Architecture for Pattern Analysis and Machine Intelligence, 1987  
Program Committee, Workshop on Computer Architecture and Image Database Management, 1985

### **Invited Activities**

Invited speaker, Conferenza Italiana Sistemi Intelligenti, Ancona, Italy, September 27, 2006, talk title: Face Recognition using Cyclographs and Summation Invariants  
Invited Participant, Dagstuhl Workshop on Theoretical Foundations of Computer Vision: Multi-Image Search, Filtering, Reasoning and Visualization, Dagstuhl, Germany, 2000  
Invited Participant, NSF Workshop on High Performance Computing and Communications for Grand Challenge Applications: Computer Vision, Natural Language and Speech Processing, and Artificial Intelligence, 1992  
Invited Participant, NSF Workshop on Challenges in Computer Vision Research: Future Directions of Research, 1991

### **Department Administration (elected positions)**

Member, Management Committee, Computation and Informatics in Biology and Medicine Training Grant, 2002-2005  
Member, Finance Committee, Department of Computer Sciences, 1996-1999, 2000-2002  
Chair, Department of Computer Sciences, 1990-1993  
Member, Merit Review Committee, Department of Computer Sciences, 1990-1993, 2004  
Associate Chair, Department of Computer Sciences, 1987-1990

### **Reviewing for Major Journals and Conferences**

ACM Computing Surveys  
Communications of the ACM  
Computer Vision and Pattern Recognition Conference  
Computer Vision, Graphics, and Image Processing: Image Understanding  
IEEE Computer Magazine  
IEEE MultiMedia Magazine  
IEEE Transactions on Image Processing  
IEEE Transactions on Pattern Analysis and Machine Intelligence  
IEEE Transactions on Robotics and Automation  
IEEE Transactions on Systems, Man and Cybernetics  
IEEE Transactions on Acoustics, Speech, and Signal Processing  
Image and Vision Computing  
International Conference on Computer Vision  
International Journal of Computer Vision  
Journal of Real-Time Imaging  
Machine Vision and Applications  
SIGGRAPH Conference

## Courses Taught

Computer Vision  
Machine Learning for Computer Vision Seminar  
Hierarchical Computer Vision Seminar  
Vision for Robotics and Automation Seminar  
Introduction to Artificial Intelligence  
Advanced Artificial Intelligence  
Artificial Intelligence Programming Tools  
The Science of Art  
Advances in Science and Engineering in the Italian Renaissance

## PUBLICATIONS

### A. Journal Articles

1. A. Klinger and C. R. Dyer, Experiments on picture representation using regular decomposition, *Computer Graphics and Image Processing* **5**, 1976, 68-105.
2. J. Weszka, C. R. Dyer and A. Rosenfeld, A comparative study of texture measures for terrain classification, *IEEE Trans. Systems, Man, and Cybernetics* **6**, 1976, 269-285.
3. C. R. Dyer and A. Rosenfeld, Fourier texture features: Suppression of aperture effects, *IEEE Trans. Systems, Man, and Cybernetics* **6**, 1976, 703-705.
4. C. R. Dyer and A. Rosenfeld, Thinning algorithms for grayscale pictures, *IEEE Trans. Pattern Analysis and Machine Intelligence* **3**, 1979, 88-89.
5. T. Hong, C. R. Dyer and A. Rosenfeld, Texture primitive extraction using an edge-based approach, *IEEE Trans. Systems, Man, and Cybernetics* **10**, 1980, 659-675.
6. C. R. Dyer, A. Rosenfeld and H. Samet, Region representation: Boundary codes from quadtrees, *Comm. ACM* **23**, 1980, 171-179.
7. C. R. Dyer, T. Hong and A. Rosenfeld, Texture classification using gray level cooccurrence based on edge maxima, *IEEE Trans. Systems, Man, and Cybernetics* **10**, 1980, 158-163.
8. C. R. Dyer, One-way bounded cellular automata, *Information and Control* **44**, 1980, 261-281.
9. C. R. Dyer, Computing the Euler number of an image from its quadtree, *Computer Graphics and Image Processing* **13**, 1980, 270-276.
10. C. R. Dyer, A fast parallel algorithm for the closest pair problem, *Information Processing Letters* **11**, 1980, 49-52.

11. C. R. Dyer and A. Rosenfeld, Propagation algorithms for framing rectangle construction, *Pattern Recognition* **12**, 1980, 211-215.
12. C. R. Dyer, Relation of one-way parallel/sequential automata to two-dimensional finite-state automata, *Information Sciences* **23**, 1981, 25-30.
13. C. R. Dyer and A. Rosenfeld, Parallel image processing by memory-augmented cellular automata, *IEEE Trans. Pattern Analysis and Machine Intelligence* **3**, 1981, 29-41.
14. C. R. Dyer and A. Rosenfeld, Triangle cellular automata, *Information and Control* **48**, 1981, 54-69.
15. C. R. Dyer, The space efficiency of quadtrees, *Computer Graphics and Image Processing* **19**, 1982, 335-348.
16. C. R. Dyer, Gauge inspection using Hough transforms, *IEEE Trans. Pattern Analysis and Machine Intelligence* **5**, 1983, 621-623.
17. J. M. Cibulskis and C. R. Dyer, An analysis of node linking in overlapped pyramids, *IEEE Trans. Systems, Man, and Cybernetics* **14**, 1984, 424-436.
18. S-B. Ho and C. R. Dyer, Shape smoothing using medial axis properties, *IEEE Trans. Pattern Analysis and Machine Intelligence* **8**, 1986, 512-520.
19. C. F. Neveu, C. R. Dyer, and R. T. Chin, 2-D object recognition using multi-resolution models, *Computer Vision, Graphics, and Image Processing* **34**, 1986, 52-65.
20. R. T. Chin and C. R. Dyer, Model-based recognition in robot vision, *ACM Computing Surveys* **18**, 1986, 67-108.
21. M. F. Augusteijn and C. R. Dyer, Recognition and recovery of the three-dimensional orientation of planar point patterns, *Computer Vision, Graphics, and Image Processing* **36**, 1986, 76-99.
22. M. R. Korn and C. R. Dyer, 3-D multiview object representations for model-based object recognition, *Pattern Recognition* **20**, 1987, 91-103.
23. C. V. Stewart and C. R. Dyer, Scheduling algorithms for PIPE (Pipelined Image-Processing Engine), *J. Parallel and Distributed Computing* **5**, 1988, 131-153.
24. H. Plantinga and C. R. Dyer, Visibility, occlusion, and the aspect graph, *Int. J. of Computer Vision* **5**, 1990, 137-160.

25. K. W. Bowyer and C. R. Dyer, Aspect graphs: An introduction and survey of recent results, *Int. J. of Imaging Systems and Technologies* **2**, 1990, 315-328.
26. O. Faugeras, J. Mundy, N. Ahuja, C. R. Dyer, A. Pentland, R. Jain, K. Ikeuchi and K. Bowyer, Why aspect graphs are not (yet) practical for computer vision, *Computer Vision, Graphics and Image Processing: Image Understanding* **55**, 1992, 212-218.
27. W. B. Seales and C. R. Dyer, Viewpoint from occluding contour, *Computer Vision, Graphics and Image Processing: Image Understanding* **55**, 1992, 198-211.
28. B. Wah, T. Huang, A. Joshi, D. Moldovan, J. Aloimonos, R. Bajcsy, D. Ballard, D. DeGroot, K. DeJong, C. Dyer, S. Fahlman, R. Grishman, L. Hirschman, R. Korf, S. Levinson, D. Miranker, N. Morgan, S. Nirenburg, T. Poggio, E. Riseman, C. Stanfill, S. Stolfo, S. Tanimoto and C. Weems, Report on workshop on high performance computing and communications for grand challenge applications: Computer vision, speech and natural language processing, and artificial intelligence, *IEEE Trans. Knowledge and Data Engineering* **5**, 1993, 138-154.
29. D. W. Eggert, K. W. Bowyer, C. R. Dyer, H. I. Christensen and D. B. Goldgof, The scale space aspect graph, *IEEE Trans. Pattern Analysis and Machine Intelligence* **15**, 1993, 1114-1130.
30. M. Allmen and C. R. Dyer, Computing spatiotemporal relations for dynamic perceptual organization, *Computer Vision, Graphics, and Image Processing: Image Understanding* **58**, 1993, 338-351.
31. K. N. Kutulakos and C. R. Dyer, Recovering shape by purposive viewpoint adjustment, *Int. J. Computer Vision* **12**, 1994, 113-136.
32. W. Hibbard, B. E. Paul, A. L. Battaiola, D. A. Santek, M-F. Voidrot-Martinez, and C. R. Dyer, Interactive visualization of computations in the earth and space sciences, *IEEE Computer* **27**(7), July 1994, 65-72.
33. K. N. Kutulakos and C. R. Dyer, Global surface reconstruction by purposive control of observer motion, *Artificial Intelligence* **78**(1-2), 1995, 147-177.
34. S. M. Seitz and C. R. Dyer, View-invariant analysis of cyclic motion, *Int. J. Computer Vision* **25**(3), 1997, 231-251.
35. M. G. Fleming, C. Steger, J. Zhang, J. Gao, A. B. Cognetta, I. Pollak and C. R. Dyer, Techniques for a structural analysis of dermatoscopic imagery, *Computerized Medical Imaging and Graphics* **22**, 1998, 375-389.
36. S. M. Seitz and C. R. Dyer, Photorealistic scene reconstruction by voxel coloring, *Int. J. Computer Vision* **35**(2), 1999, 151-173.

37. G-D. Guo and C. R. Dyer, Learning from examples in the small sample case: Face expression recognition, *IEEE Transactions on Systems, Man and Cybernetics Part B: Cybernetics* **35**(3), 2005, 479-488.
38. W. Liu, J. A. Zagzebski, T. Varghese, C. R. Dyer, U. Techavipoo and T. J. Hall, Segmentation of elastographic images using a coarse-to-fine active contour model, *Ultrasound in Medicine and Biology* **32**(3), 2006, 397-408.

## B. Book Chapters

1. B. H. McCormick, E. W. Kent and C. R. Dyer, A cognitive architecture for computer vision, in *Fifth Generation Computer Systems*, T. Moto-Oka, ed., North-Holland, Amsterdam, 1982, 245-264.
2. C. R. Dyer, Pyramid algorithms and machines, in *Multicomputers and Image Processing: Algorithms and Programs*, K. Preston and L. Uhr, eds., Academic Press, New York, 1982, 409-420.
3. B. H. McCormick, E. W. Kent and C. R. Dyer, A visual analyzer for real-time interpretation of time-varying imagery, in *Multicomputers and Image Processing: Algorithms and Programs*, K. Preston and L. Uhr, eds., Academic Press, New York, 1982, 453-464.
4. J. M. Cibulskis and C. R. Dyer, Node linking strategies in pyramids for image segmentation, in *Multiresolution Image Processing and Analysis*, A. Rosenfeld, ed., Springer-Verlag, Berlin, 1984, 109-120.
5. C. R. Dyer and M. J. Clarke, VLSI architectures for curve detection, in *VLSI for Pattern Recognition and Image Processing*, K. S. Fu, ed., Springer-Verlag, New York, 1984, 157-173.
6. B. P. Kjell and C. R. Dyer, Segmentation of textured images by pyramid linking, in *Pyramidal Systems for Computer Vision*, V. Cantoni and S. Levialdi, eds., Springer-Verlag, Berlin, 1986, 273-288.
7. C. R. Dyer, Multiscale image understanding, in *Parallel Computer Vision*, L. Uhr, ed., Academic Press, New York, 1987, 171-213.
8. G. Verghese, K. L. Gale and C. R. Dyer, Real-time, parallel motion tracking of three-dimensional objects from spatiotemporal sequences, in *Parallel Algorithms for Machine Intelligence and Vision*, V. Kumar, P. Gopalakrishnan and L. Kanal, eds., Springer-Verlag, New York, 1990, 310-339.
9. C. V. Stewart and C. R. Dyer, Parallel simulation of a connectionist stereo algorithm on a shared-memory multiprocessor, in *Parallel Algorithms for Machine Intelligence and Vision*, V. Kumar, P. Gopalakrishnan and L. Kanal, eds., Springer-Verlag, New York, 1990, 340-359.

10. C. R. Dyer and A. Rosenfeld, Thinning algorithms for grayscale pictures, in *Fuzzy Models for Pattern Recognition: Methods That Search for Structures in Data*, J. C. Bezdek and S. K. Pal, eds., IEEE Press, Piscataway, N.J., 1992, 347-348.
11. K. W. Bowyer and C. R. Dyer, Three-dimensional shape representation, in *Handbook of Pattern Recognition and Image Processing: Computer Vision*, T. Y. Young, ed., Academic Press, New York, 1994, 17-51.
12. W. Hibbard, C. R. Dyer and B. Paul, The VIS-AD data model: Integrating metadata and polymorphic display with a scientific programming language, in *Database Issues for Data Visualization* (Lecture Notes in Computer Science No. 871), J. P. Lee and G. G. Grinstein, eds., Springer-Verlag, New York, 1994, 37-68.
13. W. L. Hibbard, C. R. Dyer, and B. E. Paul, Interactivity and the dimensionality of data displays, in *Perceptual Issues in Visualization*, G. Grinstein and H. Levkowitz, eds., Springer-Verlag, Berlin, 1995, 75-82.
14. L-Y. Yu and C. R. Dyer, Shape recovery from stationary surface contours by controlled observer motion, in *Advances in Image Understanding: A Festschrift for Azriel Rosenfeld*, K. Bowyer and N. Ahuja, eds., IEEE Computer Society Press, Los Alamitos, Ca., 1996, 177-193.
15. S. M. Seitz and C. R. Dyer, Cyclic motion analysis using the period trace, in *Motion-Based Recognition*, M. Shah and R. Jain, eds., Kluwer, Boston, 1997, 61-85.
16. C. R. Dyer, Volumetric scene reconstruction from multiple views, in *Foundations of Image Understanding*, L. S. Davis, ed., Kluwer, Boston, 2001, 469-489.

### **C. Refereed Conference Papers**

1. C. R. Dyer and D. L. Milgram, Viewmaster — A system for building image processing programs, *Proc. 8th Symp. Automatic Imagery Pattern Recognition*, 1978, 170-179.
2. A. Nakamura and C. R. Dyer, Bottom-up cellular pyramids for image analysis, *Proc. 4th Int. Joint Conf. Pattern Recognition*, 1978, 494-496.
3. P. Selfridge, J. Prewitt, C. R. Dyer and S. Ranade, Segmentation algorithms for abdominal computerized tomography scans, *Proc. 3rd Int. Computer Software and Applications Conf.*, 1979, 571-577.
4. C. R. Dyer, Space efficiency of region representation by quadtrees, *Proc. Workshop on Picture Data Description and Management*, 1980, 31-36.

5. C. R. McLean and C. R. Dyer, An analog relaxation processor, *Proc. 5th Int. Conf. Pattern Recognition*, 1980, 58-60.
6. C. R. Dyer, A VLSI pyramid machine for hierarchical parallel image processing, *Proc. IEEE Conf. Pattern Recognition and Image Processing*, 1981, 381-386.
7. C. R. Dyer and M. J. Clarke, Optimal curve detection in VLSI, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1983, 161-162.
8. M. J. Clarke and C. R. Dyer, Systolic arrays for a dynamic programming application, *Proc. 12th IEEE Workshop Applied Imagery Pattern Recognition*, 1983.
9. C. R. Dyer and S-B. Ho, Medial-axis-based shape smoothing, *Proc. 7th Int. Conf. Pattern Recognition*, 1984, 333-335.
10. M. F. Augusteijn and C. R. Dyer, Model-based shape from contour and point patterns, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1985, 100-105.
11. B. P. Kjell and C. R. Dyer, Edge separation and orientation texture measures, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1985, 306-311.
12. C. F. Neveu, C. R. Dyer, and R. T. Chin, Object recognition using Hough pyramids, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1985, 328-333.
13. Y. Luo, R. T. Chin, and C. R. Dyer, 2-D object recognition using hierarchical boundary segments, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1985, 426-428.
14. B. P. Kjell and C. R. Dyer, Segmentation of textured images, *Proc. IEEE Conf. Computer Vision and Pattern Recognition*, 1986, 476-481.
15. C. R. Dyer and B. P. Kjell, Texture segmentation using edge-based tokens, *Proc. 12th Annual IEEE Industrial Electronics Society Conference*, 1986, 101-106.
16. W. H. Plantinga and C. R. Dyer, An algorithm for constructing the aspect graph, *Proc. 27th Annual Symp. Foundations of Computer Science*, 1986, 123-131.
17. W. H. Plantinga and C. R. Dyer, The Asp: A continuous, viewer-centered representation for 3D object recognition, *Proc. 1st Int. Conf. on Computer Vision*, 1987, 626-630.
18. C. V. Stewart and C. R. Dyer, Heuristic scheduling algorithms for PIPE, *Proc. Workshop on Computer Architecture for Pattern Analysis and Machine Intelligence*, 1987, 75-82.
19. C. V. Stewart and C. R. Dyer, A connectionist model for stereo vision, *Proc. IEEE 1st Int. Conf. on Neural Networks*, 1987, IV-215 - IV-223.

20. C. V. Stewart and C. R. Dyer, Local constraint integration in a connectionist model of stereo vision, *Proc. Computer Vision and Pattern Recognition Conf.*, 1988, 165-170.
21. C. V. Stewart and C. R. Dyer, The trinocular general support algorithm: A three-camera stereo algorithm for overcoming binocular matching errors, *Proc. 2nd Int. Conf. on Computer Vision*, 1988, 134-138.
22. G. Vergheese, K. L. Gale and C. R. Dyer, Real-time motion tracking of three-dimensional objects, *Proc. IEEE Conf. Robotics and Automation*, 1990, 1998-2003.
23. H. Plantinga, C. R. Dyer and B. Seales, Real-time hidden-line elimination for a rotating polyhedral scene using the aspect representation, *Proc. Graphics Interface '90*, 1990, 9-16.
24. W. B. Seales and C. R. Dyer, Shaded rendering and shadow computation for polyhedral animation, *Proc. Graphics Interface '90*, 1990, 175-182.
25. M. Allmen and C. R. Dyer, Cyclic motion detection using spatiotemporal surfaces and curves, *Proc. 10th Int. Conf. on Pattern Recognition*, 1990, 365-370.
26. W. B. Seales and C. R. Dyer, Modeling the rim appearance, *Proc. 3rd Int. Conf. on Computer Vision*, 1990, 698-701.
27. M. Allmen and C. R. Dyer, Computing spatiotemporal surface flow, *Proc. 3rd Int. Conf. on Computer Vision*, 1990, 47-50.
28. W. B. Seales and C. R. Dyer, Representing the dynamics of the occluding contour, *Proc. SPIE, Vol. 1383: Sensor Fusion III: 3-D Perception and Recognition*, 1991, 47-58.
29. M. Allmen and C. R. Dyer, Long-range spatiotemporal motion understanding using spatiotemporal flow curves, *Proc. Computer Vision and Pattern Recognition Conf.*, 1991, 303-309.
30. W. B. Seales and C. R. Dyer, Constrained viewpoint from occluding contour, *Proc. Workshop on Directions in Automated CAD-Based Vision*, 1991, 54-63.
31. M. Allmen and C. R. Dyer, Toward spatiotemporal-motion-based recognition, *Proc. Int. Joint Conf. on Artificial Intelligence Workshop on Dynamic Scene Understanding*, 1991.
32. C. R. Dyer and W. B. Seales, Viewpoint from occluding contour, in *Progress in Image Analysis and Processing II: Proc. 6th Int. Conf. on Image Analysis and Processing*, V. Cantoni, M. Ferretti, S. Levialdi, R. Negrini and R. Stefanelli, eds., World Scientific, Singapore, 1992, 318-325.

33. W. Hibbard, C. R. Dyer and B. Paul, A development environment for data analysis algorithms, *Proc. Conf. Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology*, 1992, 101-107.
34. K. N. Kutulakos and C. R. Dyer, Recovering shape by purposive viewpoint adjustment, *Proc. Computer Vision and Pattern Recognition Conf.*, 1992, 16-22.
35. D. W. Eggert, K. W. Bowyer, C. R. Dyer, H. I. Christensen and D. B. Goldgof, The scale space aspect graph, *Proc. Computer Vision and Pattern Recognition Conf.*, 1992, 335-340.
36. B. Seales and C. R. Dyer, An occlusion-based representation of shape for viewpoint recovery, *Proc. 10th European Conf. on Artificial Intelligence*, 1992, 816-820.
37. D. W. Eggert, K. W. Bowyer, C. R. Dyer, H. I. Christensen and D. B. Goldgof, Applying the scale space concept to perspective projection aspect graphs, in *Theory and Applications of Image Analysis: Selected Papers from the 7th Scandinavian Conference on Image Analysis*, P. Johansen and S. Olsen, eds., World Scientific, Singapore, 1992, 48-62.
38. W. Hibbard, C. R. Dyer and B. Paul, Display of scientific data structures for algorithm visualization, *Proc. Visualization '92*, 1992, 139-146.
39. W. Hibbard, C. R. Dyer and B. Paul, Using VIS-AD to visualize a cloud discrimination algorithm, *Video Proc. Visualization '92*, 1992.
40. T. Rhyne, M. Bolstad, P. Rheingans, L. Petterson, W. Shackelford, M. Botts, E. Pepke, K. Johnson, W. Hibbard, C. Dyer. B. Paul and L. Treinish, Visualization requirements in the atmospheric and environmental sciences, *Proc. Visualization '92*, 1992, 428-435.
41. W. Hibbard, C. R. Dyer and B. Paul, Graphical representations of scientific data, *Proc. Workshop on Two and Three Dimensional Spatial Data: Representation and Standards*, 1992.
42. W. Hibbard, C. R. Dyer and B. Paul, VIS-AD data management, *Proc. Conf. Iterative Information and Processing Systems for Meteorology, Oceanography, and Hydrology*, 1993, 158-161.
43. K. N. Kutulakos, V. J. Lumelsky, and C. R. Dyer, Vision-guided exploration: A step toward general motion planning in three dimensions, *Proc. 1993 IEEE Int. Conf. on Robotics and Automation*, 1993, 289-296.
44. K. N. Kutulakos and C. R. Dyer, Toward global surface reconstruction by purposive viewpoint adjustment, *Proc. Computer Vision and Pattern Recognition Conf.*, 1993, 726-727.
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