

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
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

Principal Investigator, *RI: Small: Acquisition and Modeling of Dense Nonrigid Shape and Motion*, National Science Foundation, 9/2009 – 8/2015

Co-Investigator, *Quantifying Driver Distraction and Engagement using Video Analytics*, Federal Highway Administration, 4/2014 – 7/2015 (PI: J. Lee)

Principal Investigator, *EAGER: III: Discovering Spontaneous Social Events*, National Science Foundation, 9/2011 – 8/2014 (with X. Zhu)

Trainer, *Computation and Informatics in Biology and Medicine*, National Library of Medicine, 7/2012 – 6/2017 (PI: M. Craven)

Investigator, *Institutional Clinical and Translational Science Award*, National Institutes of Health, 6/2012 – 5/2017 (PI: M. Drezner)

PATENTS

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

Ph.D. STUDENTS

Gary Pack, *Semiparametric Geometric Models for Extracting White Matter Volumetric Structures of the Brain*, 2012

Yu-Chi Lai, *Photorealistic Animation Rendering with Population Monte Carlo Energy Redistribution*, 2010

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

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

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

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

Professional Societies

Fellow, Institute of Electrical and Electronics Engineers (IEEE)

Fellow, International Association for Pattern Recognition (IAPR)

Member, Sigma Xi

Professional Committees

Member, Leadership Committee, UW-Madison Eye Research Institute, 2006-2010

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

Member, Governing Board, International Association for Pattern Recognition (IAPR), 2002-2010

Member, IAPR Fellow Committee, 2006-2008

Member, IEEE Computer Society Conference and Tutorials Planning Board, 2005-2011

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, 22nd International Conference on Pattern Recognition, 2014
 Program Committee, ACM/IEEE 7th International Conference on Distributed Smart
 Cameras, 2013
 Program Committee, 1st Workshop on User-Centered Computer Vision, 2013
 Program Committee, 12th European Conference on Computer Vision, 2012
 Program Committee, 21st International Conference on Pattern Recognition, 2012
 Program Committee, 25th Computer Vision and Pattern Recognition Conference, 2012
 Program Committee, IEEE Workshop on Applications of Computer Vision, 2012
 Program Committee, IS&T/SPIE Electronic Imaging 2012: Computer Vision and Image
 Analysis of Art III, 2012
 Program Committee, 24th Computer Vision and Pattern Recognition Conference, 2011
 Program Committee, Electronic Imaging 2011: Computer Vision and Image Analysis of
 Art II, 2011
 Program Committee, 20th International Conference on Pattern Recognition, 2010
 Program Committee, 23rd Computer Vision and Pattern Recognition Conference, 2010
 Program Committee, International Workshop on Person-Oriented Vision, 2010
 Program Committee, Electronic Imaging 2010: Computer Vision and Image Analysis in
 the Study of Art, 2010
 Program Committee, 9th Asian Conference on Computer Vision, 2009
 Area Chair, Program Committee, Computer Vision and Pattern Recognition
 Conference, 2009
 Program Committee, 12th International Conference on Computer Vision, 2009
 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, 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
Computational Photography
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.
39. G-D. Guo, Y. Fu, T. S. Huang and C. R. Dyer, Image-based human age estimation by manifold learning and locally adjusted robust regression, *IEEE Trans. Image Processing* **17**(7), 2008, 1178-1188.
40. B. M. Smith, C. R. Dyer, M. V. Chitturi and J. D. Lee, Automatic Driver Head State Estimation in Challenging Naturalistic Driving Videos, *Journal of the Transportation Research Board*, 2017.

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.
17. R. Arora and C. R. Dyer, Joint projective invariants for distributed camera networks, in *Distributed Video Sensor Networks*, B. Bhanu, C. V. Ravishankar, A. K. Roy-Chowdhury, H. Aghajan, and D. Terzopoulos, eds., Springer, New York, 2010.

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. Verghese, 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.
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