

PUBLICATIONS OF THEO PAVLIDIS

The notation **GC**: followed by a number stands for Google Citations. It is number of citations obtained from **Google Scholar** as of July 2009. (In the case of books it is only for the original English version.) I have included the data only when the count exceeds 100.

AUTHORED BOOKS (in reverse chronological order)

- T. Pavlidis *Fundamentals of X Programming*, Kluwer Academic/Plenum Publishing, April 1999 (374 pp)
- T. Pavlidis *Interactive Computer Graphics in X*, PWS Publishing Company, Boston, 1996 (555 pp).
- T. Pavlidis, *Algorithms for Graphics and Image Processing*, Computer Science Press, Rockville, Maryland, 1982, (416 pp). Translated into Russian (1986), Polish (1987), Chinese (1988), and German (1990). Included in *Dr. Dobb's CD of Graphics Programming, 1995. GC:1154*
- T. Pavlidis, *Structural Pattern Recognition*, Springer-Verlag, Berlin-Heidelberg-New York, 1977, (302 pp). (Second printing: 1980.) Translated into Chinese, 1981. **GC:803**
- T. Pavlidis, *Biological Oscillators: Their Mathematical Analysis*, Academic Press, New York, 1973, (224 pp). **GC:271**

EDITED BOOKS and SPECIAL ISSUES (in reverse chronological order)

- Luc M. Vincent and Theo Pavlidis (editors) *Document Recognition*, Proceedings of SPIE, vol. **2181**, February 1994.
- T. Pavlidis and S.Mori (editors) Special Issue on Optical Character Recognition *IEEE Proceedings*, **80**, July 1992.
- R. Mohr, T. Pavlidis, and A. Sanfeliu (editors), *Structural Pattern Analysis*, Series in Computer Science - **19**, World Scientific, 1990 (260 pp).
- G. Ferrate, T. Pavlidis, A. Sanfeliu, H. Bunke (editors), *Syntactic and Structural Pattern Recognition*, NATO ASI Series, Series F, **45**, 1988, Springer-Verlag, (467 pp.)
- K. S. Fu and T. Pavlidis (editors), *Dahlem Workshop Report on Biomedical Pattern Recognition and Image Processing*, Dahlem Conferences Life Sciences Report 15, Verlag Chemie, Weinheim , 1979.

PATENTS (in chronological order)

1. T. Pavlidis, J. Cai, F. Schuessler, and J. D. Chen ``Method of Decoding Bar Code Symbols form Partial Scans," *U.S. Patent 5,241,164*, Aug. 31, 1993.
2. D. P. Goren, T. Pavlidis, and G. Spitz ``Decoding Bar Codes from Multiple Scans using Element Replacement," *U.S. Patent 5,262,626*, Nov. 16, 1993.
3. T. Pavlidis and J. Cai ``Decoding Bar Code Symbols by Determining the Best Alignment of Partial Scans," *U.S. Patent 5,278,398*, Jan. 11, 1994.
4. T. Pavlidis and J. Zhou ``Page Segmentation with Tilt Compensation," *U.S. Patent 5,285,504*, Feb. 8, 1994.
5. T. Pavlidis, Y. P. Wang, and J. Swartz ``High Density Two-Dimensional Bar Code Symbol," *U.S. Patent 5,304,786*, April 19, 1994. **GC:154**
6. E. B. Joseph and T. Pavlidis ``Analog Waveform Decoder utilizing Histogram of Edge Sizes," *U.S. Patent 5,311,001*, May 10, 1994.
7. T. Pavlidis, Y. P. Wang, and J. Swartz ``Systems Utilizing a High Density Two Dimensional Bar Code Symbol," *U.S. Patent 5,399,846*, March 21, 1995.
8. E. B. Joseph and T. Pavlidis ``Analog Waveform Decoder using Peak Locations," *U.S. Patent 5,504,318*, Apr. 2, 1996.

9. C-C. J. Li, T. Pavlidis, and J. Katz "Method and System for Bar Code Acquisition" *U.S. Patent 5,504,319*, April 2, 1996.
10. T. Pavlidis, Y. P. Wang, and J. Swartz "High Density Two Dimensional Bar Code Symbology" *U.S. Patent 5,504,322*, April 2, 1996.
11. T. Pavlidis "Segmenting a page of a document into areas which are text and which are halftone" *U.S. Patent 5,566,255*, Oct. 15, 1996.
12. T. Pavlidis, Y. P. Wang, and J. Swartz "Microfilm Reader for High Density Two-Dimensional Bar Code Symbology," *U.S. Patent 5,796,090*, August 18, 1998.
13. J. Swartz, ... , T. Pavlidis, (total of 8 names) "Statistical Sampling Security Methodology for self-scanning System," *U.S. Patent 6,092,725*, July 25, 2000.
14. J. Swartz, ... , T. Pavlidis, (total of 8 names) "Statistical Sampling Security Methodology for self-scanning System," *U.S. Patent 6,672,506*, January 6, 2004.
15. T. Pavlidis, E. Joseph, D. He, E. Hatton, and K. Lu "Measurement of dimensions of solid objects from two-dimensional image(s)" *U. S. Patent 6,995,762*, February 7, 2006.

JOURNAL PAPERS, CHAPTERS OF BOOKS, AND SELECTED CONFERENCE PAPERS

1963

1. E. I. Jury and T. Pavlidis, "Aperiodicity Criteria for Linear Discrete Systems," *IRE Trans. on Circuit Theory*, **CT-9** (1963), pp. 431-433.
2. E. I. Jury and T. Pavlidis, "Stability and Aperiodicity Constraints for Systems Design," *IEEE Trans. on Circuit Theory*, **CT-10** (1963), pp. 137-141.
3. E. I. Jury and T. Pavlidis, "A Literature Survey of Biocontrol Systems," *IEEE Trans. on Automatic Control*, **AC-8** (1963), pp. 210-217.

1964

4. T. Pavlidis, "A Modification of a Proposed Model for Eye Tracking Movements," *IEEE Trans. on Bio-Medical Engineering*, **BME-11** (1964), p. 52.

1965

5. T. Pavlidis and E. I. Jury, "Analysis of a New Class of Pulse Frequency Modulated Feedback Systems," *IEEE Trans. on Automatic Control*, **AC-10** (1965), pp. 35-43.
6. T. Pavlidis, "A New Model for Simple Neural Nets and Its Application in the Design of a Neural Oscillator," *Bulletin of Mathematical Biophysics*, **27** (1965), pp. 215-229.

1966

7. T. Pavlidis, "Design of Neural Nets with Intermittent Response and Certain Other Relevant Studies," *Bulletin of Mathematical Biophysics*, **28** (1966), pp. 51-74.
8. T. Pavlidis, "Stability of a Class of Discontinuous Dynamical Systems," *Information and Control*, **9** (1966), pp. 298-322.
9. T. Pavlidis, "Optimal Control of Pulse Frequency Modulated Systems," *IEEE Trans. on Automatic Control*, **AC-11** (1966), pp.676-684.

1967

10. T. Pavlidis, "Stability of Systems Described by Differential Equations Containing Impulses," *IEEE Trans. on Automatic Control*, **AC-12** (1967), pp. 43-45.

11. T. Pavlidis, "The Relation Between a certain Class of Abstract Systems and Models for Neural Nets," *IEEE Trans. on Automatic Control*, **AC-12** (1967), pp. 113-114.
12. T. Pavlidis, "A Mathematical Model for the Light Affected System in the Drosophila Eclosion Rhythm," *Bulletin of Mathematical Biophysics*, **29** (1967), pp. 291-310.
13. T. Pavlidis, "A Model for Circadian Clocks," *Bulletin of Mathematical Biophysics*, **29** (1967), pp. 781-791.

1968

14. T. Pavlidis, W. F. Zimmerman and J. Osborn, "A Mathematical Model for Temperature Effects on Circadian Rhythms," *Journal of Theoretical Biology*, **18** (1968), pp. 210-221.
15. W. F. Zimmerman and C. S. Pittendrigh and T. Pavlidis, "Temperature Compensation of the Driving Oscillation in Drosophila Pseudoobscura and its Entrainment by Temperature Cycles," *Journal of Insect Physiology*, **14** (1968), pp. 669-684.
16. T. Pavlidis, "Studies on Biological Clocks," *Some Mathematical Problems in Biology*, (W. Gerstenhaber, editor), American Math. Society, Providence, Rhode Island, (1968), pp. 88-112.
17. T. Pavlidis, "Computer Recognition of Figures through Decomposition," *Information and Control*, **12** (1968), pp. 526-537.
18. T. Pavlidis, "Analysis of Set Patterns," *Pattern Recognition*, **1** (1968), pp. 165-178.

1969

19. T. Pavlidis, "Populations of Interacting Oscillators and Circadian Rhythms," *Journal of Theoretical Biology*, **22** (1969), pp. 418-426.
20. T. Pavlidis, "An Explanation of the Oscillatory Free Runs in Circadian Rhythms," *The American Naturalist*, **103** (1969), pp. 31-42.
21. T. Pavlidis and W. Kauzmann, "Toward a Quantitative Biochemical Model for Circadian Oscillators," *Archives of Biochemistry and Biophysics*, **132** (1969), pp. 338-348.

1971

22. T. Pavlidis, "Populations of Biochemical Oscillators as Circadian Clocks," *Journal of Theoretical Biology*, **33** (1971), pp.319-338.
23. T. Pavlidis, "Mathematical Models of Circadian Rhythms: Their Usefulness and Their Limitations," *Biochemistry* (M. Menaker, editor), National Academy of Sciences, Washington, D.C., (1971), pp. 110-116.
24. T. Pavlidis, "Linguistic Analysis of Waveforms," *Software Engineering* (J. Tou, ed.), **2**, Academic Press, (1971), pp. 203-225.
25. J. P. Mylopoulos and T. Pavlidis, "On the Topological Properties of Quantized Spaces: I. The Notion of Dimension," *Journal of the ACM*, **18** (1971), pp. 239-246.
26. J. P. Mylopoulos and T. Pavlidis, "On the Topological Properties of Quantized Spaces: II. Connectivity and Order of Connectivity," *Journal of the ACM*, **18** (1971), pp. 247-254.

1972

27. T. Pavlidis, "Representation of Figures by Labeled Graphs," *Pattern Recognition*, **4** (1972), pp. 5-17.
28. T. Pavlidis, "Structural Pattern Recognition: Primitives and Juxtaposition Relations," *Frontiers of Pattern Recognition*, (M. S. Watanabe, ed.) Academic Press (1972), pp. 421-451.
29. T. Pavlidis, "Linear and Context-Free Graph Grammars," *Journal of ACM*, **19** (1972), pp. 11-22.

30. T. Pavlidis and G. S. Fang, "A Segmentation Technique for Waveform Classification," *IEEE Trans. on Computers*, **C-21** (1972), pp. 901-904.
31. G. S. Fang and T. Pavlidis, "Signal Classification through Quasi-Singular Detection with Applications in Mechanical Fault Diagnosis," *IEEE Trans. on Information Theory*, **IT-18** (1972), pp. 631-636.
32. T. Pavlidis, "Grammatical and Graph Theoretic Analysis of Pictures," *Graph Languages* (F. Nake and A. Rosenfeld, editors), North Holland Publishing Company, (1972), pp. 210-224.
33. T. Pavlidis, "Segmentation of Pictures and Maps through Functional Approximation," *Computer Graphics and Image Processing*, **1** (1972), pp. 360-372.

1973

34. T. Pavlidis, "Waveform Segmentation through Functional Approximation," *IEEE Trans. on Computers*, **C-22** (1973), pp. 689-697.
35. H. Y. Feng and T. Pavlidis, "Finding "Vertices" in a Picture," *Computer Graphics and Image Processing*, **2** (1973) pp. 103-117.
36. T. Pavlidis, "The Existence of Synchronous States in Populations of Oscillators," *Quantitative Biology of Metabolism*, (1973), pp. 73-80. (including discussion).
37. T. Pavlidis, "The Free Run Period of Circadian Rhythms and Phase Response Curves," *American Naturalist*, **107** (1973), pp. 524-530.

1974

38. T. Pavlidis and A. P. Maika, "Uniform Piecewise Polynomial Approximation with Variable Joints," *Journal of Approximation Theory*, **12** (1974), pp. 61-69.
39. T. Pavlidis and S. L. Horowitz, "Segmentation of Plane Curves," *IEEE Trans. on Computers*, **C-23** (1974), pp. 860-870. **GC:331**
40. T. Pavlidis, "Techniques for Optimal Compaction of Pictures and Maps," *Computer Graphics and Image Processing*, **3** (1974), pp. 215-224.
41. T. Pavlidis, "Applications of Stochastic Approximation to Piecewise Polynomial Approximations with Variable Joints," *IEEE Trans. Systems, Man, Cybernetics*, **SMC-4** (1974), pp. 568-570.
42. S.L. Horowitz and T. Pavlidis "Picture Segmentation by a Directed Split and Merge Procedure" *Proc. ICPR*, 1974, Denmark, pp.424-433. **GC: 256**

1975

43. T. Pavlidis, "Optimal Piecewise Polynomial L2 Approximation of Functions of One and Two Variables," *IEEE Trans. on Computers*, **C-24** (1975), pp. 98-102.
44. H. Y. Feng and T. Pavlidis, "The Generation of Polygonal Outlines of Objects from Gray Level Pictures," *IEEE Trans. on Circuits and Systems*, **CAS-22** (1975), pp. 427-439.
45. H. Y. Feng and T. Pavlidis, "Decomposition of Polygons into Simpler Components: Feature Generation for Syntactic Pattern Recognition," *IEEE Trans. on Computers*, **C-24** (1975), pp. 636-650.
46. S Tanimoto and T. Pavlidis, "A Hierarchical Data Structure for Picture Processing," *Computer Graphics and Image Processing*, **4** (1975), pp. 104-113. **GC:282**
47. T. Pavlidis, "Biological Clock Mutants and Parameter Changes in Mathematical Models," *Bulletin of Mathematical Biology*, **37** (1975), pp. 407-417.
48. T. Pavlidis, "Spatial Organization of Chemical Oscillators via an Averaging Operator," *Journal Chem. Physics*, **63** (1975), pp. 5269-5273.
49. T. Pavlidis, "Spatial and Temporal Organization of Populations of Interacting Oscillators," *The Molecular Basis of Circadian Rhythms*, (J. W. Hastings & H. G. Scheiwger, editors), Dahlem Konferenzen, Berlin 1975, pp.131-148.

50. T. Pavlidis and F. Ali, "Computer Recognition of Handwritten Numerals by Polygonal Approximations," *IEEE Trans. Systems, Man, Cybernetics*, **SMC-5** (1975), pp. 610-614.

1976

51. S. L. Horowitz and T. Pavlidis, "Picture Segmentation by a Tree Traversal Algorithm," *Journal of the ACM*, **23** (1976), pp. 368-388. **GC:313**
52. J. F. Aldridge and T. Pavlidis, "Clocklike Behavior of Biological Clocks," *Nature*, **259** (1976), pp. 343-344.
53. T. Pavlidis, "Syntactic Pattern Recognition on the Basis of Functional Approximation," in *Pattern Recognition and Artificial Intelligence* (C. H. Chen, editor), Academic Press, 1976, pp. 389-398.
54. T. Pavlidis, "The Use of Algorithms of Piecewise Approximations for Picture Processing Applications," *ACM Trans. on Mathematical Software*, **2** (1976), pp. 305-321.

1977

55. L. P. Chang and T. Pavlidis, "Fuzzy Decision Tree Algorithms," *IEEE Trans. Systems, Man, Cybernetics*, **SMC-7** (1977), pp. 28-35.
56. T. Pavlidis and H. Y. Feng, "Shape Description," Chapter 6 in *Applications of Syntactic Pattern Recognition* (K. S. Fu, editor), Springer-Verlag, 1977, pp. 125-145.
57. S. Tanimoto and T. Pavlidis, "The Editing of Picture Segmentations using Local Analysis of Graphs," *CACM*, **20** (1977), pp.223-229.
58. F. Ali and T. Pavlidis, "Syntactic Recognition of Handwritten Numerals," *IEEE Trans. Systems, Man, Cybernetics*, **SMC-7** (1977), pp.537-541.
59. T. Pavlidis, "Polygonal Approximations by Newton's method," *IEEE Trans. on Computers*, **C-26** (1977), pp.800-807.
60. T. Pavlidis and H.M. Pinsker, "Oscillator Theory and Neurophysiology," *Federation Proceedings*, **36** (1977), pp.2033-2035.

1978

61. T. Pavlidis, "What do Mathematical Models Tell Us About Circadian Clocks," *Bull. Math. Biology*, **40** (1978) pp. 625-636.
62. T. Pavlidis, "A Minimum Storage Boundary Tracing Algorithm and its Application in Automatic Inspection," *IEEE Trans. Systems, Man, Cybernetics*, **SMC-8** (1978), pp.66-69.
63. T. Pavlidis and K. Steiglitz, "The Automatic Counting of Asbestos Fibers in Air Samples," *IEEE Trans. on Computers*, **C-27** (1978), pp.258-261.
64. T. Pavlidis, "A Review of Algorithms for Shape Analysis," *Computer Graphics and Image Processing*, **7** (1978), pp.243-258.
65. S.L. Horowitz and T. Pavlidis, "A Graph-Theoretic Approach to Picture Processing," *Computer Graphics and Image Processing*, **7** (1978), pp. 282-291.
66. T. Pavlidis, "Comments on a 'New Shape Factor'," *Computer Graphics and Image Processing*, **8** (1978), pp.310-311.
67. T. Pavlidis, "Qualitative Similarities between the Behavior of Coupled Oscillators and Circadian Rhythms," *Bull. Math. Biology*, **40** (1978) pp. 675-992.

1979

68. T. Pavlidis and F. Ali, "A Hierarchical Syntactic Shape Analyzer," *IEEE Trans. Pattern Analysis and Machine Intelligence*, **PAMI-1** (1979), pp.2-9.
69. T. Pavlidis "Hierarchies in Structural Pattern Recognition," *IEEE Proceedings*, Special Issue on Pattern Recognition and Image Processing, **67** (1979), pp.737-744.

70. R.L.P. Chang and T. Pavlidis, "Applications of Fuzzy Sets in Curve Fitting," *Fuzzy Sets and Systems*, **2** (1979), pp.67-74.
71. T. Pavlidis "Filling Algorithms for Raster Graphics," *Computer Graphics and Image Processing*, **10** (1979), pp.126-141.
72. P.C. Chen and T. Pavlidis, "Segmentation by Texture using a Co-occurrence Matrix and a Split-and-Merge Algorithm," *Computer Graphics and Image Processing*, **10** (1979), pp.172-182. **GC:112**
73. T. Pavlidis "The Use of a Syntactic Shape Analyzer for Contour Matching," *IEEE Trans. Pattern Analysis and Machine Intelligence*, **PAMI-1** (1979), pp.307-310.
74. M. Yannakakis and T. Pavlidis, "Topological Characterizations of Families of Graphs Generated by Certain Types of Graph Grammars," *Information and Control*, **42** (1979), pp.72-86.
75. T. Pavlidis, "Methodologies for Shape Analysis," in *Biomedical Pattern Recognition and Image Processing*, (K. S. Fu and T. Pavlidis, editors), Verlag Chemie, 1979, pp. 131-151.
76. T. Pavlidis, "Structural Descriptions and Graph Grammars," in *Pictorial Information Systems* (K. S. Fu, and S. K. Chang, editors), Springer-Verlag pp. 86-103.
77. T. Pavlidis and D.J. Sakrison, "Applications of a Simple Statistical Model for Curves," *Proc. IEEE Conf. on Pattern Recognition and Image Processing*, Chicago, Aug. 6-8, 1979, pp. 599-603.
78. L. Krakauer and T. Pavlidis "Visual Printed Wiring Board Fault Detection by A Geometrical Method," *Proc. COMSAC*, Chicago, Nov. 6-8, 1979, pp. 260-265.

1980

79. T. Pavlidis, "Algorithms for Shape Analysis of Contours and Waveforms," *IEEE Trans. Pattern Analysis and Machine Intelligence*, **PAMI-2** (1980), pp. 301-312. **GC:211**
80. P.C. Chen and T. Pavlidis, "Image Segmentation as an Estimation Problem," *Computer Graphics and Image Processing*, **12** (1980), pp.153-172. Also in *Image Modeling*, (A. Rosenfeld, ed.), Academic Press, 1981, pp. 9-28.
81. T. Pavlidis, "A Thinning Algorithm for Discrete Binary Images," *Computer Graphics and Image Processing* **13** (1980), pp. 142-157. **GC:129**
82. T. Pavlidis, "Shape Analysis and Digitization," *Pattern Recognition in Practice* (E. S. Gelsema and L. N. Kanal, editors), North-Holland, 1980, pp. 123-129.

1981

83. T. Pavlidis "Mathematical Models," in *Biological Rhythms* (J. Aschoff, editor), vol.5 of Handbook of Behavioral Neurophysiology, Plenum, 1981, pp. 41-54.
84. C. M. Bjorklund and T. Pavlidis, "Global Shape Analysis by K-Syntactic Similarity," *IEEE Trans. Pattern Analysis and Machine Intelligence*, **PAMI-3** (1981), pp. 144-155.
85. T. Pavlidis, "Contour Filling in Raster Graphics," *Proc. ACM-SIGGRAPH*, Dallas, Aug. 5-7, 1981, pp. 29-36.

1982

86. F. Ali and T. Pavlidis "Noise Filtering in Binary Pictures by Combinatorial Techniques," *Pattern Recognition*, **15** (1982), pp.131-135.
87. T. Pavlidis "An Asynchronous Thinning Algorithm," *Computer Graphics and Image Processing* **20**. (1982), pp. 133-157.

1983

88. Chen, P. C. and T. Pavlidis "Segmentation by Texture Using Correlation," *IEEE Trans. Pattern Analysis and Machine Intelligence*, **PAMI-5** (1983), pp. 64-69.

89. T. Pavlidis "Curve Fitting with Conic Splines," *ACM Trans. on Graphics*, **2**, (1983), pp. 1-31.
90. T. Pavlidis "Effects of Distortions on the Recognition Rate of a Structural OCR System," *Proc. IEEE Computer Vision and Pattern Recogn. Conf.* Washington, D.C., June 21-23, 1983, pp. 303-309.

1985

91. W. E. L. Grimson and T. Pavlidis "Discontinuity Detection for Visual Surface Reconstruction," *Computer Vision, Graphics, and Image Processing* **30**. (1985), pp. 316-330.
92. T. Pavlidis "Scan Conversion of Regions Bounded by Parabolic Splines," *IEEE Computer Graphics and Applications* **5**. (1985), pp.47-53.
93. G. Wolberg and T. Pavlidis "Restoration of Binary Images Using Stochastic Relaxation with Annealing" *Pattern Recognition Letters*, **3**. (1985), pp. 375-388.
94. T. Pavlidis and C. J. Van Wyk "An Automatic Beautifier for Drawings and Illustrations," *Proceedings of SIGGRAPH'85*, San Francisco, July 22-26, 1985, pp. 225-234.

1986

95. T. Pavlidis "A Vectorizer and Feature Extractor for Document Recognition" *Computer Vision, Graphics, and Image Processing*, **35**. (1986), pp. 111-127. **GC:118**
96. T. Pavlidis and G. Wolberg "An Algorithm for the Segmentation of Bilevel Images," *Proc. IEEE Computer Vision and Pattern Recognition Conference*, Miami Beach, June 22-26, 1986, pp. 570-575.
97. H.S. Baird, S. Kahan, and T. Pavlidis "Components of an Omnifont Page Reader", *Proc. ICPR*, Oct. 1986. Paris, France, pp. 34-348.

1987

98. T. Pavlidis "Pattern Recognition," *Encyclopedia of Physical Science and Technology*, **10**, pp. 210-225, Academic Press, 1987.
99. S. Kahan, T. Pavlidis, and H. S. Baird, "On the Recognition of Printed Characters of Any Font And Size", *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-9** (1987), pp. 274-288. **GC:234**
100. D. Lee, T. Pavlidis, and G. W. Wasilkowski "A Note on the Trade-off between Sampling and Quantization in Signal Processing," *J. of Complexity*, **3** (1987), pp. 359-371.

1988

101. T. Pavlidis "Problems in Recognition of Drawings," in *Syntactic and Structural Pattern Recognition*, (G. Ferrate, T. Pavlidis, A. Sanfeliu, and H. Bunke, editors) NATO ASI Series, Series F, **45**, Springer-Verlag, 1988, pp. 103-113.
102. T. Pavlidis "Image Analysis," *Ann. Rev. of Computer Science*, (J. F. Traub, ed.), **3** (1988), pp.121-146.
103. D. Lee and T. Pavlidis "One-Dimensional Regularization with Discontinuities," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-10** (1988), pp.822-829.

1990

104. T. Pavlidis and Y-T. Liow "Integrating Region Growing and Edge Detection," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-12** (1990), pp. 225-233. **GC:362**

105. Y. T. Liow and T. Pavlidis "Use of Shadows for Extracting Buildings in Aerial Images," *Computer Vision, Graphics, and Image Processing*, **49**. (1990), pp. 242-277.
106. T. Pavlidis, J. Swartz, and Y. P. Wang "Fundamentals of Bar-Code Information Theory," *IEEE Computer Magazine*, **23**. (April 1990), pp. 74-86.
107. M-H. Chen and T. Pavlidis "Image Seaming for Segmentation on Parallel Architecture," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-12** (1990), pp. 588-594.
108. T. Pavlidis "Comments on Stochastic Sampling in Computer Graphics," *ACM Trans. on Graphics*, **9**. (April 1990), pp. 233-236.
109. Y. P. Wang and T. Pavlidis "Optimal Correspondence of String Subsequences," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-12** (1990), pp. 1080-1087. (Preliminary version presented at IAPR Workshop on *Syntactic and Structural Pattern Recognition*, June 13-15, 1990, Murray Hill, NJ.)
110. T. Pavlidis and Y-T. Liow "Use of Shadows for Detecting Buildings in Aerial Images," *Structural Pattern Analysis*, (R. Mohr, T. Pavlidis, and A. Sanfeliu, editors), Series in Computer Science - **19**, World Scientific, 1990, pp. 165-180.
111. T. Pavlidis and Y. P. Wang "Two-Dimensional Bar Codes," *Proc. IEEE Industrial Automation Conference, Toronto, June 1990*, pp. 10.3-10.8.

1991

112. J. Hu and T. Pavlidis "Function Plotting using Conic Splines," *IEEE Computer Graphics and Applications*, **11** (1991), pp. 89-94.
113. M. Chen, D. Lee, and T. Pavlidis "Residual Analysis for Feature Detection," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **PAMI-13** (1991), pp. 30-40.
114. T. Pavlidis "Applications of Splines to Shape Descriptions," in *Visual Form: Analysis and Recognition*, (eds. C. Arcelli, L. P. Cordella, and G. Sanniti di Baja), Plenum Press, New York, 1992, pp. 431-441.

1992

115. L. Scarlatos and T. Pavlidis "Hierarchical Triangulation using Cartographic Coherence," *CVGIP: Graphical Models and Image Processing*, **54** (March 1992), pp. 147-161.
116. T. Pavlidis "Why Progress in Machine Vision is so Slow," *Pattern Recognition Letters*, **13** (April 1992), pp. 221-225.
117. T. Pavlidis, J. Swartz, and Y. P. Wang "Information Encoding with Two-Dimensional Bar-Codes," *IEEE Computer Magazine*, **25** (June 1992), pp. 18-28.
118. T. Pavlidis and J. Zhou "Page Segmentation and Classification," *CVGIP: Graphical Models and Image Processing*, **54** (Nov. 1992), pp. 484-496. **GC:182**
119. T. Saitoh and T. Pavlidis "Page Segmentation without Rectangle Assumption," *Proc. 11th Intern. Conference on Pattern Recognition* The Hague, Netherlands, Aug. 31-Sept.3, 1992, **2**, pp. 277-280.
120. J. Hu, W. J. Sakoda, and T. Pavlidis "Interactive Road Finding for Aerial Images," *Proc. IEEE Workshop on Applications of Computer Vision*, Palm Springs, Calif. Nov. 30 - Dec. 2, 1992, pp. 56-63.

1993

121. E. Joseph and T. Pavlidis "Deblurring of Bilevel Waveforms," *IEEE Trans. on Image processing* **2** (April 1993), pp. 223-235.
122. T. Pavlidis "Recognition of Printed Text under Realistic Conditions," *Pattern Recognition Letters*, **14** (April 1993), pp. 317-326. (Special issue on Postal Processing and Character Recognition, edited by H. Tominaga.)

123. T. Pavlidis, M.H. Chen, and E. Joseph "Sampling and Quantization of Bilevel Signals" *Pattern Recognition Letters* **14** (July 1993), pp. 559-562.
124. L. Wang and T. Pavlidis "Direct Gray Scale Extraction of Features for Character Recognition" *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **15** (Oct. 1993), pp. 1053-1067. **GC:151**
125. L. Wang and T. Pavlidis "Detection of Curved and Straight Segments from Gray Scale Topography," *CVGIP: Image Understanding*, **58** (Nov. 1993), pp.352-365.
126. T. Pavlidis "How to bring Computer Recognition to the Level of Human Recognition" *Proc. IPTP Symposium on Handwritten Character Recognition -Past, Present, Future -*, Tokyo, Japan, April 2, 1993, pp. 1-6 (Keynote address).
127. Lori L. Scarlatos and Theo Pavlidis "Techniques for Merging Vector Features with 3D Terrain Models in Real Time" *ACSM/ASPRS Annual Convention*, New Orleans, LA, February 1993, pp. 372-381.
128. Lori L. Scarlatos and Theo Pavlidis "Real Time Manipulation of 3D Terrain Models" *1993 ACSM/ASPRS Annual Convention*, New Orleans, LA, February 1993, pp. 331-339.
129. W. J. Sakoda, J. Hu, and T. Pavlidis, "Computer Assisted Tracing of Faint Roads in Satellite Images," *1993 ACSM/ASPRS Annual Convention*, New Orleans, LA, February 1993, pp. 311-323.

1994

130. J. Rocha and T. Pavlidis "A Shape Analysis Model with Applications to a Character Recognition System," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **16** (April 1994), pp. 393-404. **GC:124**
131. E. Joseph and T. Pavlidis "Bar Code Waveforms Recognition Using Peak Locations" *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **16** (June 1994), pp. 630-640.
132. J. Zhou and T. Pavlidis "Discrimination of Characters by a Multi-Stage Recognition Process," *Pattern Recognition*, **27**, No. 11 (Nov. 1994), pp. 1539-1550.
133. T. Pavlidis "Context Dependent Shape Perception," in *Aspects of Visual Form Processing*, (C. Arcelli, L. P. Cordella, and G. Sanniti di Baja, eds.) World Scientific, 1994, pp. 440-454.
134. A. Marcelli and T. Pavlidis "Using Projections for preclassification of character shape," *Proc. SPIE Conf. Document Recognition*, vol. 2181 San Jose, Calif. Feb. 6-10, 1994, pp. 4-13.
135. C.C.J. Li, J. Xu, and T. Pavlidis "A Window-based Bar Code Acquisition System," *Proc. SPIE Conf. Document Recognition*, vol. 2181 San Jose, Calif. Feb. 6-10, 1994, pp. 125-132.
136. J. Rocha, B. Sakoda, J. Zhou, and T. Pavlidis, "Deferred interpretation of grayscale saddle features for recognition of touching and broken characters," *Proc. SPIE Conf. Document Recognition*, vol. 2181 San Jose, Calif. Feb. 6-10, 1994, pp. 342-350.

1995

137. J. Rocha and T. Pavlidis "Character Recognition without Segmentation," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **17** (Sept. 1995), pp. 903-909.
138. T. Pavlidis, W. J. Sakoda, and H. Shi "Matching Graph Embeddings for Shape Analysis," *Proc. ICDAR'95*, Montreal, Canada, Aug. 14-16, 1995, pp. 729-733.

1996

139. J. Hu and T. Pavlidis "A Hierarchical Approach to Efficient Curvilinear Object Searching," *Computer Vision and Image Understanding*, **63** (March 1996), pp. 208-220.

140. T. Pavlidis "How to Teach Graphics Using X (and Live to Tell About It)" *Computer Graphics*, **30** (August 1996), pp. 41-42. (Summary of presentation from SIGGRAPH'96 educator's program.)
141. T. Pavlidis "Challenges in Document Recognition: Bottom Up and Top Down Processes," *Proc. Intern. Conference on Pattern Recognition*, Vienna, Austria, Aug. 1996, **D**, pp. 500-504 (invited paper).

1997

142. A. Marcelli, N. Likhareva, and T. Pavlidis "A Structured Indexing Method for Character Recognition," *Computer Vision and Image Understanding*, **66** (June 1997), pp. 330-346.
143. H. Shi and T. Pavlidis "Font Recognition and Contextual Processing for More Accurate Text Recognition," *Proc. ICDAR'97*, Ulm, Germany, Aug. 18-20, 1997, pp. 39-44.
144. T. Pavlidis "Teaching Graphics Through Video Games," *Computer Graphics*, **31** (August 1997), pp. 56-57. (Summary of presentation from SIGGRAPH'97 educator's program.)

1998

145. T. Pavlidis "Document De-Blurring Using Maximum Likelihood Methods," in *Document Analysis Systems II* (J.J. Hull and S.L. Taylor, editors) World Scientific, 1998, pp. 3-16.
146. H. Shi and T. Pavlidis "A System for Text Recognition Based on Graph Embedding Matching," in *Document Analysis Systems II* (J. J. Hull and S. L. Taylor, editors), World Scientific, 1998, pp. 118-134.
147. T. Pavlidis and K. D. Hunter "Using Color in the X Window System versus Microsoft Windows: Part 1," *IEEE Computer Graphics and Applications*, **18** (Nov./Dec. 1998), pp. 64-73.

1999

148. T. Pavlidis and K. D. Hunter "Using Color in the X Window System versus Microsoft Windows: Part 2," *IEEE Computer Graphics and Applications*, **19** (Jan./Feb. 1999), pp. 75-83.
149. S. J. Shellhammer, D. P. Goren, and T. Pavlidis "Novel Signal Processing Techniques in Bar Code Scanning," *IEEE Robotics and Automation Magazine*, **6** (1999), pp. 57-65.
150. F. Chang, Y.C. Lu, and T. Pavlidis "Feature Analysis using Line Sweep Thinning Algorithm" *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **21** (Feb. 1999), pp. 145-158.
151. K. D. Hunter and T. Pavlidis "Non-Interactive Geometric Probing Reconstructing non-Convex Polygons," *Computational Geometry: Theory and Applications*, **14** (Dec. 1999), pp. 221-240.
152. A.K. Chhabra, J.F. Arias, T. Pavlidis, P.X. Pan, and P.V. Sanders, "A client-server architecture for document image recognition," *Proceedings of the Third IAPR International Workshop on Graphics Recognition (GREC'99)*, Jaipur, India, September 1999, pp. 144-151.

2000

153. T. Pavlidis "A New Paper/Computer Interface: Two-Dimensional Symbolologies" *Proc. ICPR*, Sept. 2000, Barcelona, Spain, pp. 145-151 (invited paper).

154. H. Tesser and T. Pavlidis "RoadFinder Front End: An Automated Road Extraction System" *Proc. ICPR*, Sept. 2000, Barcelona, Spain, pp. 338-341 (v.1).

2001

155. T. Pavlidis "Tracing Middleware's Historic Origins" *IEEE Computer Magazine* **34** (August 2001), p. 4 (Letter to Editor)

2003

156. T. Pavlidis "36 years on the Pattern Recognition Front. Lecture given at ICPR 2000 in Barcelona, Spain on the occasion of receiving the K.S. Fu Prize" *Pattern Recognition Letters* **24** (Jan. 2003), pp. 1-7. Extended version available [here](#).

2005

157. T. Pavlidis "Discrete geometry and Azriel Rosenfeld" *Pattern Recognition Letters* **26** (Feb. 2005), pp. 235-238.

2007

158. K-F Lu and T. Pavlidis "Detecting Textured Objects using Convex Hull" *Machine Vision and Applications*, **18** (2007), pp. 123-133.

2009

159. T. Pavlidis "Why Meaningful Automatic Tagging of Images is Very Hard", *Proceedings ICME2009*, pp. 1432-1435.
160. T. Pavlidis "The Number of All Possible Meaningful or Discernible Pictures", *Pattern Recognition Letters*, vol. 30 (2009), pp. 1413-1415.

2014

161. T. Pavlidis "The Challenge of General Machine Vision" *Journal of Signal, Image and Video Processing*, vol. 8, No. 1 (January 2014), pp. 191-195.