

CURRICULUM VITAE

May, 2010

DIMITRIS ANASTASSIOU

Education: (Electrical Engineering and Computer Science)

Ph.D. University of California, Berkeley, 1979

M.S. University of California, Berkeley, 1975

Graduation Diploma National Technical University of Athens, Greece, 1974 (5 year program)

Work Experience:

7/92 to present Professor
Part of 1999-00 Acting Chairman
7/85 to 6/92 Associate Professor
8/83 to 6/85 Assistant Professor
Department of Electrical Engineering
Columbia University, New York

1985-86 Ac. yr. Visiting Associate Professor
Division of Computer Science
National Technical University of Athens, Greece

10/78 to 8/83 Research Staff Member
IBM Thomas J. Watson Research Center
Yorktown Heights, New York

Honors and Awards:

2001 Great Teacher Award, Society of Columbia Graduates, Columbia University.

IEEE Fellow, 1998, "for contributions to video technology, developing high-performance digital image and video coding techniques."

National Science Foundation Presidential Young Investigator Award, 1986-1991.

IBM Outstanding Innovation Award, November 1982, for algorithm development and implementation for the IBM videoconferencing system.

IBM Invention Achievement Award, January 1983 for authorship of a significant number of IBM patents.

Eugene C. and Mona Fay Gee Graduate Scholarship, University of California, Berkeley, 1975-76 academic year.

Ph.D. Thesis:

“Applications of Information Theory to Image Encoding”
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Columbia University Administrative Service:

Director, Genomic Information Systems Laboratory, 2002-present.
Director, Image and Advanced Television Laboratory, 1985-2000.
Director, Columbia New Media Technology Center (CNMTC), 1998.
Project Leader of “ADVENT” project, 1989-2000.
Associate Director for Multimedia Applications, Center for Telecommunications Research, 1993-1996.
Member of Executive Committee Board of Center for Telecommunications Research, 1988-1995.
Member of Executive Committee Board of “Center for Advanced Technology in Computers and Information Systems,” April 1991 - July 1993.

Refereed Publications (Archival Journals):

1. D. Anastassiou and D.J. Sakrison, "New Bounds to $R(D)$ for Additive Sources and Applications to Image Encoding," IEEE Transactions on Information Theory, vol. IT-25, no. 2, March 1979, pp. 145-155.
2. D. Anastassiou and D.J. Sakrison, "A Probability Model for Simple Closed Random Curves," IEEE Transactions on Information Theory, vol. IT-27, No. 3, May 1981, pp. 376-381.
3. D. Anastassiou and D.J. Sakrison, "Some Results Regarding the Entropy Rate of Random Fields," IEEE Transactions on Information Theory, vol. IT-28, no. 2, March 1982, pp. 340-343.
4. D. Anastassiou and K.S. Pennington, "Digital Halftoning of Images," IBM Journal of Research and Development, special issue on Image Processing and Pattern Recognition, vol. 26, no. 6, November 1982, pp. 687-698. This paper is also reprinted in "Milestone Series, Selected Papers on Digital Halftoning," Jan P. Allebach, Editor, SPIE Press, 1999.
5. D. Anastassiou, M. Brown, H.C. Jones, E. Kubiliun, J.L. Mitchell, W.B. Pennebaker, K.S. Pennington, "Series/I Based Videoconferencing System," IBM Systems Journal, vol. 22, Nos. 1 and 2, 1983, pp. 97-110.
6. D. Anastassiou, W.B. Pennebaker and J.L. Mitchell, "Gray Scale Image Coding for Freeze-Frame Videoconferencing," IEEE Transactions on Communications, Vol. COM-34, No. 4, April 1986, pp. 382-395. This paper is also summarized in section 6.1 of the book: Digital Pictures, by A.N. Netravali and B. Haskell, Plenum Press, 1988, pp. 506-509.
7. Y.P. Tsvividis and D. Anastassiou, "Switched-capacitor neural networks," IEE Electronics Letters, vol. 23, no. 18, August 1987, pp. 958-959.
8. D. Anastassiou, and S. Kollias, "Progressive Half-Toning of Images," IEE Electronics Letters, vol. 24, no. 8, April 14, 1988, pp. 489-490.
9. D. Anastassiou, "Neural Net Based Nonstandard A/D Conversion," IEE Electronics Letters, vol. 24, no. 10, May 12 1988, pp. 619-620.
10. Maglaris, D. Anastassiou, P. Sen, G. Karlsson and J. Robins, "Performance Models of Statistical Multiplexing in Packet Video Communications," IEEE Transactions on Communications, July 1988, pp. 834-844. This paper is reprinted in the book: Visual Communication: Technology and Applications, edited by T.R. Hsing and A.G. Tescher, SPIE publishing, pp. 359-370.

11. J.L. Mitchell, W.B. Pennebaker, D. Anastassiou and K.S. Pennington "Graphics Image Coding for Freeze-Frame Videoconferencing," IEEE Transactions on Communications, vol. 37, no. 5, May 1989, pp. 515-522.
12. P. Sen, B. Maglaris and D. Anastassiou, "Models for packet switching of variable bit rate video sources," IEEE Journal on Selected Areas in Communications, vol. 7, no. 5, June 1989, pp. 865-870.
13. S. Kollias and D. Anastassiou, "An Adaptive Algorithm for the Efficient Training of Artificial Neural Networks," IEEE Transactions on Circuits and Systems, vol. 36, no. 8, August 1989, pp. 1092-1101.
14. D. Anastassiou, "Error-Diffusion Coding for A/D Conversion," IEEE Transactions on Circuits and Systems, vol. 36, no. 9, September 1989, pp. 1175-1187. This paper is also reprinted in "Milestone Series, Selected Papers on Digital Halftoning," Jan P. Allebach, Editor, SPIE Press, 1999.
15. F.M. Wang, D. Anastassiou and A.N. Netravali, "Time-Recursive De-interlacing for IDTV and Pyramid Coding," Image Communication Journal, vol. 2, no. 3, October 1990, pp. 365-374.
16. R. Mokry, D. Anastassiou and D. Teichner, "Bandwidth Reduction for HDTV Transmission-Alternatives and Subjective Results," IEEE Transactions on Consumer Electronics, vol. 36, no. 4, November 1990, pp. 837-847.
17. D. Anastassiou and M. Vetterli, "Television by the Bit," IEEE Circuits and Devices Magazine, vol. 7, no.1, January 1991, pp. 16-22.
18. S. Kollias and D. Anastassiou, "A Unified Neural Network Approach to Digital Image Half-Toning," IEEE Transactions on Signal Processing, vol. 39, no. 4, April 1991, pp. 980-984. This paper is also reprinted in "Milestone Series, Selected Papers on Digital Halftoning," Jan P. Allebach, Editor, SPIE Press, 1999.
19. Y. Papananos and D. Anastassiou, "Analysis and VLSI Architectures of a Nonlinear Edge-Preserving Noise Smoothing Image Filter," IEE Proceedings-G, vol. 138, no. 4, August 1991, pp. 433-441.
20. D. Anastassiou and S. Kollias, "A Progressive Scheme for Digital Image Half-Toning, Coding of Half-Tones and Reconstruction," IEEE Transactions on Selected Areas in Communications, special issue on Speech and Image Coding, June 1992.

21. Y.B. Yu and D. Anastassiou, "Interlaced Video Coding with Field-Based Multiresolution Representation," *Image Communication Journal*, vol. 5, nos. 1-2, February 1993, pp. 185-199.
22. K. Jensen and D. Anastassiou, "Digitally Assisted De-interlacing for EDTV," *IEEE Transactions on Circuits and Systems for Video Technology*, April 1993.
23. D. Anastassiou, "Digital Television," Invited Paper, *IEEE Proceedings*, April 1994.
24. T.H. Chiang and D. Anastassiou, "Hierarchical coding of Digital Television," *IEEE Communications Magazine*, May 1994.
25. R. Mokry and D. Anastassiou, "Minimal Error Drift in Frequency Scalability for Motion Compensated DCT Coding," *IEEE Transactions on Circuits and Systems for Video Technology*, August 1994.
26. A. Eleftheriadis, S. Pejhan, and D. Anastassiou, "Architecture and Algorithms of the Xphone Multimedia Communication System", *ACM/Springer-Verlag Multimedia Systems Journal*, Vol. 2, No. 2, August 1994, pp. 89-100.
27. K. Jensen and D. Anastassiou, "Sub-Pixel Edge Localization and the Interpolation of Still Images," *IEEE Transactions on Image Processing*, Vol. 4, No. 3, March 1995.
28. S. Pejhan, A. Eleftheriadis, and D. Anastassiou, "Distributed Multicast Address Management in the Global Internet", *IEEE Journal on Selected Areas in Communications (Special Issue on the Global Internet)*, Vol. 13, No. 8, October 1995, pp. 1445-1456.
29. S.-F. Chang, A. Eleftheriadis and D. Anastassiou, "Development of Columbia University's Video on Demand Testbed," *Image Communication Journal*, special issue on Video on Demand and Interactive Television, Vol. 8, No. 3, April 1996, pp. 191-208.
30. S. Pejhan, M. Schwartz and D. Anastassiou, "Error Control Using Retransmission Schemes in Multicast Transport Protocols for Real-Time Media, *IEEE/ACM Transactions on Networking*, Vol. 4, No. 3, June 1996, pp. 413-428.
31. B.L. Tseng and D. Anastassiou, "Multi-Viewpoint Video Coding with MPEG-2 Compatibility," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 6, No. 4, August 1996, pp. 414-419.
32. D. Anastassiou, "What does MPEG-4 mean to me," *Image Communication Journal*, special issue on MPEG-4, Part 1: Invited Papers, Vol. 9, No. 4, May 1997, p. 469-470.

33. C.-T. Chu, D. Anastassiou and S.-F. Chang, "Hybrid Object-Based/Block Based Coding in Video Compression at Very Low Bitrate," *Image Communication Journal*, special issue on MPEG-4, Part 2, Vol. 10, Nos. 1-2, pp. 159-172, July 1997, pp. 159-172.
34. S.-F. Chang, A. Eleftheriadis, D. Anastassiou, S. Jacobs, H. Kalva and J. Zamora, "Columbia's VoD and Multimedia Research Testbed with Heterogeneous Network Support," *International Journal on Multimedia Tools and Applications*, special issue on Video on Demand Systems, Vol. 5, No. 2, September 1997, pp. 171-184.
35. S. Jacobs, A. Eleftheriadis and D. Anastassiou, "Silence Detection for Multimedia Communication Systems," *ACM/Springer Verlag Multimedia Systems Journal*, Vol. 7, No. 2, March 1999, pp. 157-164.
36. T.-H. Chiang and D. Anastassiou, "Hierarchical HDTV/SDTV Compatible Coding Using Kalman Statistical Filtering," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 9, No. 3, April 1999, pp. 424-438.
37. J. Zamora, D. Anastassiou, S.-F. Chang, and L. Ulbricht, "Objective and Subjective Quality of Service Performance of Video-on-Demand in ATM-WAN," *Image Communication Journal*, special issue on Error Resilience, No. 24, August 1999, pp. 635-654.
38. J. Zamora, S. Jacobs, A. Eleftheriadis, S.-F. Chang and D. Anastassiou, "A Practical Methodology for Guaranteeing QoS for Video on Demand," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol.10, No 1, February 2000, pp. 166-178.
39. D. Anastassiou, "Frequency-Domain Analysis of Biomolecular Sequences," *Bioinformatics*, vol. 16, no. 12, December 2000, pp. 1073-1081.
40. D. Anastassiou, "Genomic Signal Processing," *IEEE Signal Processing Magazine* theme article, Vol. 18, No 4, July 2001, pp. 8-20.
41. D. Sussillo, A. Kundaje and D. Anastassiou, "Spectrogram Analysis of Genomes," *EURASIP Journal on Applied Signal Processing*, special issue on Genomic Signal Processing, Vol. 2004, No. 1, Jan. 2004, pp. 29-42.
42. G. Cavelier and D. Anastassiou, "Data-Based Model and Parameter Evaluation in Dynamic Transcriptional Regulatory Networks," *Proteins: Structure, Function and Bioinformatics*, Vol. 55, No. 2, May 2004, pp. 339-350.
43. G. Cavelier and D. Anastassiou, "Phenotype Analysis Using Network Motifs Derived from Changes in Regulatory Network Dynamics," *Proteins: Structure, Function and Bioinformatics*, Vol. 60, No. 3, August 2005, pp. 525-546.

44. D. Anastassiou, H. Liu and V. Varadan, "Variable Window Binding for Mutually Exclusive Alternative Splicing," *Genome Biology*, Vol. 7, Issue 1, pp. R2.1-R2.12, 2006. [Highly accessed]
45. V. Varadan, D. Miller III and D. Anastassiou, "Computational Inference of the Molecular Logic for Synaptic Connectivity in *C. elegans*," *Bioinformatics*, Vol. 22, Issue 14 – ISMB 2006, pp. e497-506, 2006.
46. V. Varadan and D. Anastassiou, "Inference of Disease-Related Molecular Logic from Systems-Based Microarray Analysis," *PLoS Computational Biology*, Vol. 2, Issue 6, June 2006, pp. 585-597.
47. D. Anastassiou, "Computational Analysis of the Synergy among Multiple Interacting Genes" (Review Article), *Molecular Systems Biology*, Vol. 3, No. 83, February 2007.
48. K.C. Liang, X. Wang and D. Anastassiou, "Bayesian basecalling for DNA sequence analysis using hidden Markov models," *ACM/IEEE Transactions on Computational Biology and Bioinformatics*," Vol. 4, No. 3, July-September 2007, pp. 430-440.
49. K.C. Liang, X. Wang and D. Anastassiou, "A Profile-Based Deterministic Sequential Monte Carlo Algorithm for Motif Discovery," *Bioinformatics*, Vol. 24, Issue 1, January 2008, pp. 46-55.
50. J. Watkinson, X. Wang, T. Zheng and D. Anastassiou, "Identification of gene interactions associated with disease from gene expression data using synergy networks," *BMC Systems Biology*, Vol. 2, Issue 10, February 2008. [Highly accessed].
51. K.C. Liang, X. Wang and D. Anastassiou, "A sequential Monte Carlo Method for Motif Discovery," *IEEE Transactions on Signal Processing*, Vol. 56, No. 9, September 2008, pp. 4496-4507.
52. J. Watkinson, K.C. Liang, X. Wang, T. Zheng and D. Anastassiou, "Inference of regulatory gene interactions from expression data using three-way mutual information," *Annals of the New York Academy of Sciences*, invited paper as best performer in the DREAM2 "Genome Scale" network inference challenge, Vol. 1158, pp. 302-313, March 2009.
53. J. Watkinson and D. Anastassiou, "Synergy Disequilibrium Plots: graphical visualization of pairwise synergies and redundancies of SNPs with respect to a phenotype," *Bioinformatics*, Vol. 25, No. 11, pp. 1445-1446, July 2009.
54. A. Iliadis, J. Watkinson, D. Anastassiou and X. Wang, "A haplotype inference algorithm for trios based on deterministic sampling," under revision, *BMC Genetics*.

55. H. Kim, J. Watkinson and D. Anastassiou, "A multi-cancer metastasis-associated variant of epithelial-mesenchymal transition," submitted to *Genome Biology*.
56. H. Kim, J. Watkinson and D. Anastassiou, "Biomarker discovery from gene expression data using voting from statistically significant gene sets," submitted to the *Journal of Computational Biology*.
57. Y.H. Cheung, J. Watkinson and D. Anastassiou, "Conditional meta-analysis stratifying on detailed HLA genotypes identifies additional type 1 diabetes loci in the Major Histocompatibility Complex," submitted to *Genes and Immunity*."

Books and Book Chapters

S.-F. Chang, D. Anastassiou, A. Eleftheriadis and J. Pavlik, Editors, "Video on Demand Systems: Technology, Interoperability and Trials," Kluwer Academic Publishers, 1997 (ISBN 0-7923-9949-8).

X. Wang and D. Anastassiou and D. Guo, "Statistical Inference of Transcriptional Regulatory Networks," in *Genomic Signal Processing and Statistics*, E. Dougherty et al. (Ed.), Hindawi Pub., New York, 2005, pp. 321-340.

Refereed Publications (Conference Proceedings):

1. D. Anastassiou and D.J. Sakrison, "New Bounds to R(D) of a Source whose Output is the Sum of two Independent Random Entities," Conference Digest, 1977 IEEE International Symposium on Information Theory, Ithaca, New York, October 1977, p. 125.
2. D. Anastassiou and D.J. Sakrison, "Applications of Information Theory to Image Processing," Proceedings, International Symposium MECO '78, "Measurement and Control," Athens, Greece, June 1978.
3. D. Anastassiou and D.J. Sakrison, "A Probability Model for Simple Closed Random Curves," Conference Digest, 1979 IEEE International Symposium on Information Theory, Grignano, Italy, June 1979, p. 52.
4. D. Anastassiou and K.S. Pennington, "Some Results on Digital Half-Toning of Gray-Scale Images," Conference Digest, 1981 Picture Coding Symposium, Montreal, Canada, June 3-5 1981, pp. 126-127.
5. D. Anastassiou and J.L. Mitchell, "Dual Resolution Adaptive DPCM," Conference Digest, 1981 Picture Coding Symposium, Montreal, Canada, June 3-5 1981, pp. 144-145.

6. D. Anastassiou, "Gray-Scale Image Compression using Biased Adaptive Delta Modulation with Arithmetic Coding," Conference Digest, 1982 IEEE International Symposium on Information Theory, Les Arcs, France, June 21-25 1982, p. 90.
7. D. Anastassiou, J.L. Mitchell, W.B. Pennebaker, K.S. Pennington, "A New Freeze-Frame Teleconferencing System," Proceedings, COMPCON 82, Washington, D.C., September 1982, p. 543.
8. D. Anastassiou, J.L. Mitchell, W.B. Pennebaker, K.S. Pennington, "Image Processing and Data Compression for the IBM Internal Series/I Based Videoconferencing System," Proceedings, IEEE MELECON '83 Conference, May 24-26 1983, Athens, Greece
9. D. Anastassiou, J.L. Mitchell, W.B. Pennebaker, "A High Compression DPCM Based Scheme for Picture Coding," Proceedings, 1983 IEEE International Conference on Communications, June 19-22 1983, Boston, Massachusetts.
10. W.B. Pennebaker, J.L. Mitchell, K.S. Pennington, D. Anastassiou, "A novel video-conferencing system," Proceedings, IEEE Global Telecommunications Conference GLOBECOM '83, November 28-December 1, 1983, San Diego, California.
11. J.L. Mitchell, W.B. Pennebaker and D. Anastassiou, "Freeze-Frame Video Compression on a Small Computer," Conference Digest, 1986 Picture Coding Symposium, Tokyo, Japan, April 1986.
12. W.B. Pennebaker, J.L. Mitchell, D. Anastassiou and K.S. Pennington, "Image Processing for Video Image Compression," Conference Digest, 1986 Picture Coding Symposium, Tokyo, Japan, April 1986.
13. C.J. Georgiou and D. Anastassiou, "An Architecture for a Single Chip Performing Real Time Image Convolution," Proceedings, IEE International Conference on Image Processing and its Applications, London, U.K., June 24-26 1986.
14. Y. Papananos and D. Anastassiou, "A VLSI architecture for an edge-preserving noise-smoothing image filter," Proceedings, SPIE International Symposium on Visual Communications and Image Processing II, Cambridge, Mass., October 1987.
15. T.C. Tsai and D. Anastassiou, "Recursive Multi-directional Image Filters," Proceedings, SPIE International Symposium on Visual Communications and Image Processing, Cambridge, Mass., October 1987.
16. B. Maglaris, D. Anastassiou, P. Sen, G. Karlsson and J. Robins, "Performance Analysis of Statistical Multiplexing for Packet Video Sources," Proceedings, IEEE Globecom '87 Conference, Tokyo, Japan, Nov. 1987.

17. T.C. Tsai and D. Anastassiou, "Nonlinear Recursive Filters and Applications to Image Processing," Proceedings, IEEE International Conference on Acoustics, Speech and Image Processing, New York, April 1988, pp. 828-832.
18. D. Anastassiou, "Neural-Net Based Digital Half-Toning of Images," Proceedings, IEEE International Conference on Circuits and Systems, Helsinki, Finland, June 1988, pp. 507-511.
19. T.C. Tsai and D. Anastassiou, "Stable nonlinear recursive filters for edge enhancing noise smoothing of images," Proceedings, IEEE International Conference on Circuits and Systems, Helsinki, Finland, June 1988, pp. 2561-2565.
20. D. Anastassiou, "Nonstandard A/D Conversion Based on Symmetric Neural Networks," Proceedings, IEEE International Conference on Neural Networks, San Diego, CA, July 1988, pp. II-181-189.
21. S. Kollias and D. Anastassiou, "Adaptive Training of Multilayer Neural Networks Using a Least Squares Estimation Technique," Proceedings, IEEE International Conference on Neural Networks, San Diego, CA, July 1988, pp. I-383-391.
22. S. Kollias and D. Anastassiou, "Digital Half-Toning of Images Using Feed-forward Neural Networks," Conference Digest, First Annual INNS Meeting on Neural Networks, Boston, September 1988, Pergamon Press, p. 507.
23. D. Anastassiou and S. Kollias, "Digital Half-Toning Using Neural Networks," Proceedings, SPIE International Conference on Visual Communications and Image Processing, Cambridge, Mass., November 1988, pp. 1062-1070.
24. S. Kollias, T.C. Tsai and D. Anastassiou, "Image reconstruction from halftones," Proceedings, IEEE 1989 International Conference on Acoustics, Speech and Signal Processing, Glasgow, Scotland, U.K., May 1989.
25. F.M. Wang, D. Anastassiou and A.N. Netravali, "Time-Recursive Motion Compensated De-interlacing of Video Sequences," Proceedings, Third International Workshop on HDTV, August 1989, Torino, Italy. This paper is reprinted in the book: Signal Processing of HDTV, II, edited by L. Chiariglione, Elsevier Science Publishers, 1990, pp. 635-642.
26. D. Anastassiou, "Generalized pyramidal coding using nonlinear interpolation for HDTV coding," Proceedings, Picture Coding Symposium, Cambridge, Mass, March 1990.

27. K. Jensen and D. Anastassiou, "Image resolution enhancement using nonlinear interpolation," Proceedings, 1990 IEEE International Conference on Acoustics, Speech and Signal Processing, Albuquerque, New Mexico, April 1990.
28. M. Vetterli and D. Anastassiou, "A Multiresolution Approach for All-Digital HDTV," Proceedings, 1990 IEEE International Conference on Communications, Atlanta, Georgia, April 1990.
29. F.M. Wang, D. Anastassiou and A.N. Netravali, "Time-Recursive De-interlacing with Applications to IDTV and pyramid video coding," Proceedings 1990 IEEE International Symposium on Circuits & Systems, New Orleans, Louisiana, May 1990.
30. D. Anastassiou, R. Mokry and D. Teichner, "Bandwidth Reduction for HDTV Transmission-Alternatives and Subjective Results," Proceedings, 1990 IEEE International Conference on Consumer Electronics, Chicago, Illinois, June 1990.
31. D. Anastassiou and M. Vetterli, "All-Digital Multiresolution Coding of HDTV," Proceedings, National Association of Broadcasters (NAB) Conference, Las Vegas, April 1991.
32. F.M. Wang, T.-H. Chiang, R. Mokry, A. Eleftheriadis and D. Anastassiou, "Compatible Coding of Digital Interlaced HDTV using Prediction of the Even Fields from the Odd Fields," Proceedings, Fourth International Workshop on HDTV and Beyond, September 1991, Torino, Italy. This paper is reprinted in the book: "Signal Processing of HDTV, III, H. Yasuda and L. Chiariglione, Editors, Elsevier, 1992.
33. F.M. Wang, R. Mokry and D. Anastassiou, "High-Quality Pyramidal Interlaced Video Coding," Proceedings, Picture Coding Symposium, September 1991, Tokyo, Japan.
34. D. Anastassiou, "Scalability for HDTV," Invited Paper, Proceedings, International Workshop on HDTV'92, Kawasaki, Japan, November 18-20, 1992. This paper is reprinted in the book: "Signal Processing of HDTV, IV," E. Dubois and L. Chiariglione, Editors, Elsevier, 1993.
35. T.H. Chiang and D. Anastassiou, "Two-Layer Coding of Interlaced HDTV with Graceful Degradation," Proceedings, International Workshop on HDTV'92, Kawasaki, Japan, November 18-20, 1992. This paper is reprinted in the book: "Signal Processing of HDTV, IV," E. Dubois and L. Chiariglione, Editors, Elsevier, 1993.
36. A. Eleftheriadis, S. Pejhan and D. Anastassiou, "Algorithms and Performance Evaluation of the Xphone Multimedia Communication System, Proceedings, ACM Multimedia'93 Conference, Anaheim, CA, August 1-6, 1993.

37. Y.B. Yu and D. Anastassiou, "Software Implementation of MPEG-2 Video Encoding Using Socket Programming in LAN," Proceedings, Digital Video Compression on Personal Computers, IS&T/SPIE Symposium on Electronic Imaging, San Jose, CA, February 1994.
38. S. Pejhan, A. Eleftheriadis, and D. Anastassiou, "Multiparty Multimedia Communication Systems", Proceedings, 1994 International Conference on Electrical Engineering, Tehran, Iran, May 1994.
39. K. McKeown, D. Anastassiou, S.-F. Chang, et. al., "The JANUS Digital Library," DIGITAL LIBRARIES'94, Conf. on the Theory and Practice of Digital Libraries, College Station, Texas, June 1994.
40. S.-F. Chang, D. Anastassiou, A. Eleftheriadis, J. Meng, S. Paek, S. Pejhan and J.R. Smith, "Development of Advanced Image/Video Servers in the Video on Demand Testbed," Proceedings, IEEE Workshop on Visual Signal Processing and Communications, New Brunswick, NJ, September 1994.
41. D. Anastassiou, "Status of the MPEG-4 Standardization Effort," Invited Paper, Proceedings, SPIE Visual Communications and Image Processing Conference, Chicago, September 1994.
42. Y.-B. Yu and D. Anastassiou, "High Quality Two Layer Video Coding using MPEG-2 Syntax," Proceedings, Sixth International Workshop on Packet Video, Portland, Oregon, September 1994.
43. B. L. Tseng and D. Anastassiou, "Compatible Video Coding of Stereoscopic Sequences using MPEG-2's Scalability and Interlaced Structure," Proceedings, International Workshop on HDTV'94, Torino, Italy, October 1994. This paper is reprinted in the book: "Signal Processing of HDTV, VI," L. Chiariglione, Editor, Elsevier, 1995.
44. A. Eleftheriadis and D. Anastassiou, "Optimal Data Partitioning of MPEG-2 Coded Video", Proceedings, 1st IEEE International Conference on Image Processing (ICIP-94), Austin, Texas, November 1994, pp. I.273-I.277.
45. T.H. Chiang and D. Anastassiou, "HDTV/CDTV Compatible Coding with Recursive Estimation," Proceedings, 1st IEEE International Conference on Image Processing (ICIP-94), Austin, Texas, November 1994.
46. A. Eleftheriadis, S. Pejhan and D. Anastassiou, "Address Management and Connection Control for Multicast Communication Applications," Proceedings, IEEE INFOCOM'95 Conference, Boston, Massachusetts, April 1995, pp. 386-393.

47. A. Eleftheriadis and D. Anastassiou, "Meeting Arbitrary QoS Constraints Using Dynamic Rate Shaping of Coded Digital Video," Proceedings, 5th International Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV'95), Durham, New Hampshire, April 1995, pp. 95-106. This paper is reprinted in "Lecture Notes in Computer Science Series," Vol. 1018, Springer-Verlag, 1995.
48. D. Anastassiou, "Image Technology for New Media," Proceedings, IS&T's 48th Annual Conference, "Imaging on the Information Superhighway," Washington, DC, May 7-11, 1995
49. B.L. Tseng and D. Anastassiou, "Perceptual Adaptive Quantization of Stereoscopic Video Coding using MPEG-2's Temporal Scalability Structure," Proceedings, International Workshop on Stereoscopic and Three-Dimensional Imaging, IWS3DI'95, Santorini, Greece, September 6-8, 1995, pp. 52-58.
50. B.L. Tseng and D. Anastassiou, "A Theoretical Study on an Accurate Reconstruction of Multiview Images Based on the Viterbi Algorithm," Proceedings, International Conference on Image Processing, ICIP'95, Washington, D.C., October 1995.
51. A. Eleftheriadis and D. Anastassiou, "Constrained and General Dynamic Rate Shaping of Compressed Digital Video," Proceedings, 2nd IEEE International Conference on Image Processing (ICIP-95), Washington, DC, October 1995, pp. III.396-399.
52. S. Pejhan, M. Schwartz and D. Anastassiou, "Refinements to Rate-Based Congestion Control with Extensions to Multipoint, Multimedia Applications," Proceedings, Broadband Communications '96 International Conference, Montreal, Canada, April 23-25, 1996.
53. Zamora, D. Anastassiou and K. Ly, "Cell Delay Variation Performance of CBR and VBR MPEG-2 Sources in an ATM Multiplexer," Proceedings, EUSIPCO'96, September 10-13 1996, Trieste, Italy.
54. C.-T. Chu, D. Anastassiou and S.-F. Chang, "Bi-Directional Object-Based Coding in Video Compression at Very Low Bit Rate," Proceedings, Third International Conference on Signal Processing (ICSP'96), October 14-18, 1996, Beijing, China.
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