

RESUME - A. Murat Tekalp, Professor



College of Engineering, Koç University
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Google Scholar citations: 19,920
h-index: 71

EDUCATION

- Ph.D., Electrical, Computer and Systems Engineering, 1984
Rensselaer Polytechnic Institute, Troy, New York
Thesis : Identification and Restoration of Noisy and Blurred Images
Advisors: Howard Kaufman and John W. Woods
- M.S., Electrical, Computer and Systems Engineering, 1982
Rensselaer Polytechnic Institute, Troy, New York
Thesis : Applications of Mathematical Optimization in Image Estimation
- B.S., Electrical Engineering and Mathematics (double major program), 1980
Boğaziçi University, Istanbul, Turkey
Project: Design and Implementation Issues on FIR and IIR Digital Filters

PROFESSIONAL EXPERIENCE

- Koç University, Istanbul, Turkey
June '01 - , Professor of Electrical and Electronics Engineering
- Koç University, Istanbul, Turkey
Feb '10 - Feb. '13, Dean of Engineering
- University of Rochester, Rochester, New York 14627,
July '00 - June '05, Distinguished Professor of Electrical and Computer Engineering
November '95 - July '00, Professor of Electrical and Computer Engineering with tenure
May '90 - November '95, Associate Professor of Electrical Engineering with unlimited tenure
July '87 - May '90, Assistant Professor of Electrical Engineering
- Eastman Kodak Company, Rochester, New York 14650,
June '87 - August '87, Senior Research Scientist, Imaging Research Laboratories
December '84 - June '87, Research Scientist, Imaging Research Laboratories
- Rensselaer Polytechnic Institute, Troy, New York 12181,
January '81 - December '84, Research/Teaching Assistant, ECSE Department

Visiting and Other Appointments

- Turkish Science and Technology Foundation, Ankara, Turkey (Part-Time)
Sept '04 - Aug. '10, Electronics and Informatics Group
- Sabancı University, Tuzla, Istanbul, Turkey
Sept '99 - July '00, Visiting Professor of Telecommunications Eng.
- Bilkent University, 06533, Bilkent, Ankara, Turkey,
September '92 - June '93, Visiting Associate Professor of Electrical Engineering
- Rensselaer Polytechnic Institute, Troy, New York 12181,
January '87 - June '87, Visiting Asst. Prof. of Electrical, Computer and Systems Engineering

HONORS, AWARDS and MEMBERSHIPS

Member, Academia Europea, 2010.

Member, Turkish Academy of Sciences (TUBA), 2007.

Science Award (TUBITAK Bilim Odulu), Sci. and Tech. Research Council of Turkey, 2004.

Fellow, IEEE (S '80, M '85, Sr. '91, F '03); Member, Sigma Xi (M '83)

Fulbright Senior Scholar Award, 1999-2000 Academic year.

Distinguished Lecturer, IEEE Signal Processing Society, 1999-2000

Listed in Marquis Who'sWho in the World, 17th Edition.

National Science Foundation Research Initiation Award ('88)

Fellowship from Scientific and Technical Research Council of Turkey ('78)

PROFESSIONAL ACTIVITIES and SERVICE

Editor-in-Chief, Signal Processing: Image Communication (1999 - 2010)

Editorial Board, Proceedings of the IEEE (2014 - 2017)

Editorial Board, IEEE Signal Processing Magazine (2006 - 2009)

Editorial Board, Visual Communications and Image Representation (1996 - 2000)

Editorial Board, Graphical Models and Image Processing (1995 - 98)

Associate Editor, Multidimensional Systems and Signal Proc. (1994 - 99)

Associate Editor, IEEE Transactions on Image Processing (1994 - 96)

Associate Editor, IEEE Transactions on Signal Processing (1990 - 92)

Guest Editor for the special issue of Proceedings of IEEE on 3D Media and Displays,
April 2011.

Guest Editor for IEEE Trans. on Image Processing on Image and Video Processing
for Digital Libraries, January 2000.

Guest Editor for the special issue of Proceedings of IEEE on Multimedia Signal Processing,
May/June 1998

Technical Program Co-Chair, EUSIPCO-2005, Antalya, Turkey

General Chair, IEEE ICIP-2002, Rochester, New York

Technical Program Co-Chair, IEEE ICASSP-2000, Istanbul, Turkey

Special Sessions Chair, IEEE Int. Conf. on Image Proc., Washington, DC, Nov. 1995

Conference Co-Chair, Image and Video Processing Conference,
SPIE/IS&T Electronic Imaging Symp., San Jose, CA, Feb. 1993

Past Chair, IEEE Signal Processing Society Technical Committee on Image and Multi-
Dimensional Signal Processing (1996 - 98), Vice-Chair (1994 - 96), Member (1990 - 2000)

Member, IEEE Signal Processing Society Technical Committee on Multimedia
Signal Processing (1996 - 2001)

Chair, IEEE Rochester Section, (1994 - 95)

Organizer and the first Chairman of the Rochester Chapter of the IEEE Signal Processing
Society, Aug. 1988

EXTERNAL FUNDING

Koc University, Istanbul

TUBITAK 1001, Cloud-Based End-to-End Video Services, 9/1/15-2/28/18, TL 280,000.
TUBITAK 1001, Video over Software Defined Networks, 9/1/13-8/31/15, TL 170,000.
European Union, FP7, DIOMEDES STREP, 2/1/10 - 7/31/12, Euro 280,000.
European Union, FP7, SARACEN STREP, 1/1/10 - 3/31/13, Euro 242,000.
European Union, FP6, 3DTV NoE, 9/1/04 - 8/31/08, Euro 282,000.
European Union, FP6, SIMILAR NoE, 12/1/03 - 11/30/07, Euro 268,000.

University of Rochester

NSF ITR Program, SIRG: "Being There": User-centric wireless image-based sensor networks," (with Heinzelman, Bocko, and Sharma) 9/1/04-8/31/07, \$1,200,000. (total)
NSF, IIS Program, "An Intelligent Visual Database System: Hierarchical Content Description and Matching," 8/1/99 - 7/31/03, \$243,000. (total)
NYSTAR, Center for Advanced Technology for Electronic Imaging Systems, "Digital Video Processing," 7/1/93 - 6/30/03, \$40,000./year
Eastman Kodak Company, "Human Motion Analysis," 9/1/90 - 8/31/03, \$ 475,000. (total)
Xerox Corporation, "Digital Image and Video Watermarking," 7/1/00 - 6/30/03, \$ 25,000. /year
Keck Foundation, Center for Future Health, "Human Motion Monitoring," 1/1/00 - 6/30/02, \$43,000.
Siemens Corporate Research, Inc, "3-D Model-Based Video Processing," 10/1/97 - 3/31/02, \$ 75,000. (total)
NSF Combined Research and Curriculum Development, "A Unified Image Science and Electronic Imaging Systems Curriculum Development Initiative," (with M. Kriss, K. Parker, N. George, and K. Kutulakos), 10/1/98 - 9/30/01, \$499,855. (total)
NSF International Collaboration, "Multimedia Document Indexing," (with F. Yarman-Vural, Middle East. Tech. University-Turkey), 6/1/98 - 11/30/01, \$16,700.
NSF SIUC Research Center for Electronic Imaging Systems, "Image Sequence Processing," 7/1/92 - 6/30/00, \$ 55,000./year
Xerox Corporation, "Adaptive Color Rendering and Printer Calibration," 9/1/96 - 12/31/99, \$ 75,000. (total)
NSF International Collaboration, "Model Based Image Compression at Very Low Bit Rates," (with L. Onural and A. E. Cetin, Bilkent University-Turkey), 6/1/94 - 5/31/98, \$15,000.
National Science Foundation, "Modeling and Suppression of Motion Artifacts in MRI," 6/1/92 - 5/31/97, \$ 89,000./year (with W. E. Smith)
National Science Foundation, CISE Research Instrumentation Grants, "Research Instrumentation for Image and Video Processing," 3/1/93 - 2/28/96, \$ 40,814 (total)
NYS Center for Advanced Optical Technology, "Novel Methods for Image Sequence Enhancement and Restoration," 6/1/91 - 5/31/93, \$ 75,000. (total)
National Institute of Justice, "Image Restoration for Criminal Identification," 9/1/88 - 12/31/90, \$ 285,000., (co-investigator: H. Kaufman, Rensselaer)
National Science Foundation, CISE Research Initiation Award, "Adaptive Image Restoration and Recovery," 7/1/88 - 12/31/90, \$ 70,000.

TEACHING

Koç University, Istanbul, Turkey

Elec 201 Signals and Systems, required undergraduate course
Elec 303 Digital Signal Processing, elective undergraduate course
Elec 501 Random Processes, graduate level
Elec 506 Digital Image and Video Processing, graduate level

University of Rochester

ECE 241 Signals, undergraduate level, F88-F91, F95-F98
ECE 242 Communications, undergraduate level, S94 -S96, S98
ECE 246/446 Digital Signal Processing, F00
ECE 447 Digital Image Processing, graduate level, F86, F87, S89-S 91, F02
ECE 448 Pattern Recognition, graduate level, S88, S92
ECE 449 Digital Video Processing, graduate level, F93-F95, S97-S99, S03

Bilkent University, Ankara, Turkey (visiting)

Math 220 Linear Algebra, required undergraduate course, F92
EE 621 Video Signal Processing, (new course), graduate level, F92
EE 302 Signals and Systems II, required undergraduate course, S93
EE 524 Digital Image Processing, graduate level, S93

Rensselaer Polytechnic Institute (visiting)

35.6967 Image Restoration, Reconstruction and Coding (new course), graduate level, S87

Short Courses

Multimedia Standards, 3 days, UCLA Extension, Aug. 2000, March 2001, May 2002.
MPEG-4 and MPEG-7 Standards, 2 days, UCB Extension, May 01; Jan. 02.
Digital Video Processing, George Washington University, Continuing Education Center,
Washington, DC, Feb. 8-10, 1993; Oct. 15-17, 1993; July 27-29, 1994; May 13-17, 1996;
August 25-29, 1997; May 4-8, 1998; Denver, CO, May 20-24, 1996.
Digital Video Processing, 4 hrs, IEEE ICASSP, San Francisco, CA, Mar. 1992

UNIVERSITY SERVICE

Koç University, Istanbul, Turkey

Dean, College of Engineering (2010-2013)
Member, Academic Council
Member Executive Committee, Graduate School of Sciences and Engineering

University of Rochester

Chair, Graduate Committee, Electrical and Computer Engineering Department (9/95 - 9/99),
(9/02 -), Member (9/90 - 8/95)
Member, University Honorary Degrees Committee (9/90 - 8/92)

Date: September 6, 2017.

PUBLICATIONS

Refereed Journal Publications

1. K. T. Bagci, K. E. Sahin, and A. M. Tekalp, Compete or collaborate: Architectures for collaborative DASH video over future networks, *IEEE Trans. on Multimedia*, to appear in October 2017.
2. E. Ekmekcioglu, C. G. Gurler, A. Kondoz, and A. M. Tekalp, "Adaptive multi-view video delivery using hybrid networking," *IEEE Trans. on Circuits and Systems for Video Tech.*, vol. 27, no. 6, pp. 1313-1325, June 2017.
3. H. Egilmez and A. M. Tekalp, "Distributed QoS architectures for multimedia streaming over software defined Networks," *IEEE Trans. on Multimedia*, vol. 16, no. 6, pp. 1597-1609, 2014.
4. A.-C. G. Anadiotis, C. Z. Patrikakis and A. M. Tekalp, "Information-centric networking for multimedia, social and peer-to-peer communications," *Trans. on Emerging Telecommunications Technologies*, vol. 25, no. 4, pp. 383-391, April 2014.
5. C. G. Gurler and A. M. Tekalp, "Peer-to-peer system design for adaptive 3D video streaming," *IEEE Communications Magazine*, vol. 51, no. 5, pp. 108-114, May 2013.
6. H. Egilmez, S. Civanlar, and A. M. Tekalp, "An optimization framework for QoS-enabled adaptive video streaming over OpenFlow networks," *IEEE Trans. on Multimedia*, vol. 15, no. 3, pp. 710-715, April 2013.
7. B. Gorkemli and A. M. Tekalp, "Adaptation strategies for MGS scalable video streaming," *Signal Processing: Image Communication*, vol. 27, no. 6, pp. 595-611, July 2012.
8. F. Ofli, E. Erzin, Y. Yemez, and A. M. Tekalp, "Learn2Dance: Learning Statistical Music-to-Dance Mappings for Choreography Synthesis," *IEEE Trans. on Multimedia*, vol. 14, no. 3, pp. 747-759, June 2012.
9. S. S. Savas, C. G. Gurler, A. M. Tekalp, E. Ekmekcioglu, S. Worrall, and A. Kondoz, "Adaptive streaming of multi-view video over P2P networks," *Signal Processing: Image Communication*, vol. 27, no. 5, pp. 522-531, May 2012.
10. M. F. Sayit, T. Tunali and A. M. Tekalp, "Resilient peer-to-peer streaming of scalable video over hierarchical multicast trees with backup parent pools," *Signal Processing: Image Communication*, vol. 27, no. 2, pp. 113-125, Feb. 2012.
11. G. Saygili, C. G. Gurler, and A. M. Tekalp, "Evaluation of asymmetric stereo video coding and rate scaling for adaptive 3D video streaming," *IEEE Trans. on Broadcasting*, vol. 57, no. 2, pp. 593-601, June 2011.
12. C. G. Gurler, B. Gorkemli, G. Saygili, and A. M. Tekalp, "Flexible transport of 3D video over networks," *Proc. of the IEEE*, vol. 99, no. 4, pp. 694-707, April 2011.
13. C. G. Gurler, A. Aksay, G. Bozdagi-Akar, and A. M. Tekalp, "Architectures for multi-threaded MVC-compliant multi-view video decoding and benchmark tests," *Signal Processing: Image Communication*, vol. 25, no. 5 pp. 325-334, June 2010.
14. T. B. Abanoz and A. M. Tekalp, "SVC-based scalable multiple description video coding and optimization of encoding configuration," *Signal Processing: Image Communication*, vol. 24, no. 9, pp. 691-701, Oct. 2009.

15. F. Ofli, Y. Demir, Y. Yemez, E. Erzin, A. M. Tekalp, K. Balci, I. Kiziloglu, L. Akarun, C. Canton-Ferrer, J. Tilmanne, E. Bozkurt, A. T. Erdem, "An audio-driven dancing avatar," *J. on Multimodal User Interfaces*, 2008.
16. E. Sargin, Y. Yemez, E. Erzin, and A. M. Tekalp, "Analysis of head gesture and prosody patterns for prosody-driven head-gesture animation," *IEEE Trans. Patt. Anal. and Mach. Intel.*, vol. 30, no. 8, pp. 1330-1345, Aug. 2008.
17. A. M. Tekalp, E. Kurutepe, and M. R. Civanlar, "3DTV over IP: End-to-end streaming of multi-view video," *IEEE Signal Processing Magazine*, vol. 24, no. 6, pp. 77-87, Nov. 2007.
18. E. Kurutepe, R. Civanlar, and A. M. Tekalp, "Client-driven selective streaming of multi-view video for interactive 3DTV," *IEEE Trans. on Circ. and Syst. for Video Technology*, vol. 17, no. 11, pp. 1558-1565, Nov. 2007.
19. G. Bozdagi-Akar, A. M. Tekalp, C. Fehn, and R. Civanlar, "3DTV - A survey of transport methods," *IEEE Trans. on Circ. and Syst. for Video Technology*, vol. 17, no. 11, pp. 1622-1630, Nov. 2007.
20. E. Sargin, Y. Yemez, E. Erzin, and A. M. Tekalp, "Audio-visual synchronization and fusion using canonical correlation analysis," *IEEE Trans. Multimedia*, vol. 9, no. 7, pp. 1396-1403, Nov. 2007.
21. E. Akyol, A. M. Tekalp, and R. Civanlar, "A flexible multiple description coding framework for adaptive peer-to-peer video streaming," *IEEE Jour. Selected Topics in Signal Proc.*, vol. 1, no. 2, pp. 231-245, August 2007.
22. T. Ozcelebi, A. M. Tekalp, and M. R. Civanlar, "Delay-distortion optimization for content-adaptive video streaming," *IEEE Trans. Multimedia*, vol. 9, no. 4, pp. 826-836, June 2007.
23. O. Harmanci and A. M. Tekalp, "Rate-distortion optimal video transport over IP allowing packets with bit errors," *IEEE Trans. Image Processing*, vol. 16, no. 5, pp. 1315-1326, May 2007.
24. T. Ozcelebi, O. Sunay, A. M. Tekalp, and M. R. Civanlar, "Cross-layer optimized rate adaptation and scheduling for multiple-user wireless video streaming," *IEEE Jour. Select. Areas in Commun.*, vol. 25, no. 4, pp. 760-769, May 2007.
25. E. Akyol, A. M. Tekalp, and M. R. Civanlar, "Content-aware scalability type selection for rate adaptation of scalable video," *EURASIP Jour. on Advances in Signal Processing*, vol. 2007, Article ID 10236, 11 pages, April 2007.
26. O. Harmanci and A. M. Tekalp, "A stochastic framework for rate-distortion optimized video coding over error-prone networks," *IEEE Trans. Image Processing*, vol. 16, no. 3, pp. 684-697, March 2007.
27. A. Aksay, S. Pehlivan, E. Kurutepe, C. Bilen, T. Ozcelebi, G. Bozdagi Akar, M. R. Civanlar, and A. M. Tekalp, "End-to-end stereoscopic video streaming system with content-adaptive rate and format control," *Signal Processing: Image Communication*, vol. 22, no. 2, pp. 157-168, Feb 2007.
28. H. E. Cetingul, E. Erzin, Y. Yemez, and A. M. Tekalp, "Multimodal speaker/speech recognition using lip motion, lip texture and audio," *Signal Processing*, vol. 86, no. 12, pp. 3549-3558, December 2006.
29. G. Caner, A. M. Tekalp, G. Sharma, and W. Heinzelman, "Local image registration by adaptive filtering," *IEEE Trans. on Image Proces.*, vol. 15, no. 10, pp. 3053-3065, Oct. 2006.
30. H. E. Cetingul, Y. Yemez, E. Erzin, and A. M. Tekalp, "Discriminative analysis of lip motion features for speaker identification and speech reading," *IEEE Trans. on Image Processing*, vol. 15, no. 10, pp. 2879-2891, Oct. 2006.

31. E. Kurutepe, M. R. Civanlar, and A. M. Tekalp, "Interactive transport of multi-view videos for 3DTV applications," *Jour. of Zhejiang University, Science A*, vol. 7, no. 5, pp. 830-836, 2006.
32. E. Erzin, Y. Yemez, A. M. Tekalp, A. Ercil, H. Erdogan, and H. Abut, "Multimodal person recognition for human-vehicle interaction," *IEEE Multimedia Mag.*, vol. 13, no. 2, pp. 18-31, April-June 2006.
33. M. U. Celik, G. Sharma, and A. M. Tekalp, "Lossless watermarking for image authentication: A new framework and an implementation," *IEEE Trans. Image Processing*, vol. 15, no. 4, pp. 1042- 1049, April 2006.
34. A. Kokaram, N. Rea, R. Dahyot, A. M. Tekalp, P. Bouthemy, P. Gros, and I. Sezan, "Browsing sports video," *IEEE Signal Processing Magazine*, vol. 23, no. 2, pp. 47-58, March 2006.
35. E. Erzin, Y. Yemez, and A. M. Tekalp, "Multimodal speaker identification using an adaptive classifier cascade based on modality reliability," *IEEE Trans. on Multimedia*, vol. 7, no. 5, pp. 840-852, October 2005.
36. E. Saber, Y. Xu, and A. M. Tekalp, "Partial shape recognition by sub-matrix matching for partial matching guided image labeling," *Pattern Recognition*, vol. 38, no. 10, pp 1560-1573, Oct. 2005.
37. M. Celik, G. Sharma, A. M. Tekalp, and E. Saber, "Lossless generalized LSB data embedding," *IEEE Trans. on Image Processing*, vol. 14, no. 2, pp. 253-266, February 2005.
38. A. Ekin, A. M. Tekalp and R. Mehrotra, "Integrated semantic-syntactic video event modeling for search and browsing," *IEEE Trans. on Multimedia*, vol. 6, no. 6, pp. 839-851, Dec. 2004.
39. M. Celik, G. Sharma, and A. M. Tekalp, "Collusion-resilient fingerprinting by random pre-warping," *IEEE Signal Processing Letters*, vol. 11, no. 10, pp. 831-835, Oct. 2004.
40. Y. Xu, E. Saber, and A. M. Tekalp, "Dynamic learning from multiple examples for semantic object segmentation and search," *Computer Vision and Image Understanding*, vol. 95, no. 3, pp. 334-353, Sept. 2004.
41. C. Erdem, B. Sankur, and A. M. Tekalp, "Performance measures for video object segmentation and tracking," *IEEE Trans. on Image Processing*, vol. 13, no. 7, pp. 937 - 951, July 2004.
42. S. Dockstader, M. J. Berg, and A. M. Tekalp, "Stochastic kinematic modeling and feature extraction for gait analysis," *IEEE Trans. Image Processing*, vol. 12, no. 8, pp. 962-976, August 2003.
43. A. Ekin, A. M. Tekalp, and R. Mehrotra, "Automatic soccer video analysis and summarization," *IEEE Trans. on Image Processing*, vol. 12, no. 7, pp. 796-807, July 2003.
44. M. Celik, G. Sharma, and A. M. Tekalp, "Gray-level embedded lossless image compression," *Signal Processing: Image Communication*, vol. 18, no. 6, pp. 443-454, July 2003.
45. A. M. Ferman and A. M. Tekalp, "Two-stage hierarchical video summary extraction to match low-level user browsing preferences," *IEEE Trans. on Multimedia*, vol. 5, no. 2, pp. 244-256, June 2003.
46. Y. Xu, P. Duygulu, E. Saber, A. M. Tekalp, and F. Yarman-Vural, "Object-based image labeling through learning-by-example and multi-level segmentation," *Pattern Recognition*, vol. 36, no. 6, pp 1407 - 1423, June 2003.
47. Y. Xu, E. Saber, and A. M. Tekalp, "Object segmentation and labeling by learning from examples," *IEEE Trans. Image Processing*, vol. 12, no. 6, pp. 627-638, June 2003.

48. P. E. Eren and A. M. Tekalp, "Bi-Directional 2-D mesh representation for video object rendering, editing and superresolution in the presence of occlusion," *Signal Processing: Image Communication*, vol. 18, no. 5, pp. 321-336, May 2003.
49. C. E. Erdem, A. M. Tekalp, and B. Sankur, "Video object tracking with feedback of performance measures," *IEEE Trans. Circuits and Syst. for Video Tech.*, vol. 13, no. 4, pp. 310-324, April 2003.
50. B. Gunsel, U. Uludag, and A. M. Tekalp, "Robust watermarking of fingerprint images," *Pattern Recognition*, vol. 35, no. 12, pp. 2739-2747, Dec. 2002.
51. M. U. Celik, G. Sharma, E. Saber, and A. M. Tekalp, "Hierarchical watermarking for secure image authentication with localization," *IEEE Trans. Image Proc.*, vol. 11, no. 6, pp. 585-595, June 2002.
52. A. M. Ferman, A. M. Tekalp, and R. Mehrotra, "Robust color histogram descriptors for video segment retrieval and identification," *IEEE Trans. Image Processing*, vol. 11, no. 5, pp. 497-508, May 2002.
53. Z. Sun, A. M. Tekalp, N. Navab, and R. Visvanathan, "Interactive optimization of 3-D shape and 2-D correspondence using multiple geometric constraints via POCS," *IEEE Trans. Patt. Anal. Mach. Intel.*, vol. 24, no. 4, pp. 562-568, April 2002.
54. Y. Fu, A. Ekin, A. M. Tekalp, and R. Mehrotra, "Temporal segmentation of video objects for hierarchical object-based motion description," *IEEE Trans. Image Processing*, vol. 11, no. 2, pp. 135-145, Feb. 2002.
55. S. Dockstader and A. M. Tekalp, "Multiple camera tracking of interacting and occluded human motion," *Proc. of IEEE*, vol. 89, no. 10, pp. 1441-1455, Oct. 2001.
56. S. Dockstader and A. M. Tekalp, "On the tracking of articulated and occluded video object motion," *Real Time Imaging*, vol. 7, no. 5, pp. 415-432, Oct. 2001.
57. A. M. Ferman and A. M. Tekalp, "Fuzzy framework for unsupervised video content characterization and shot classification," *J. of Electronic Imaging*, vol. 10, no. 4, pp. 917-929, Oct. 2001.
58. I. Celasun, A. M. Tekalp, M. H. Gokcetekin, and D. M. Harmanci, "2-D mesh-based video object segmentation and tracking with occlusion resolution," *Signal Processing: Image Communication*, vol. 16, no. 10, pp. 949-962, Aug. 2001.
59. Z. Sun, R. Visvanathan, and A. M. Tekalp, "Error characterization of the factorization method for shape and motion recovery," *Comp. Vision and Image Understand.*, vol. 82, pp. 110-137, May 2001.
60. Y. Fu, A. T. Erdem, and A. M. Tekalp, "Tracking visible boundary of objects using occlusion adaptive motion snake," *IEEE Trans. Image Processing*, vol. 9, no. 12, pp. 2051-2060, Dec. 2000.
61. I. Celasun and A. M. Tekalp "Optimal 2D hierarchical content-based mesh design and update for object-based video," *IEEE Trans. Circ. and Syst. for Video Tech.*, vol. 10, no. 7, pp. 1135-1153, Oct. 2000.
62. C. Toklu, A. T. Erdem, and A. M. Tekalp, "2-D mesh-based mosaic representation for manipulation of video objects with occlusion," *IEEE Trans. Image Proc.*, vol. 9, no. 9, pp. 1617-1630, Sept. 2000.
63. C. Toklu, A. M. Tekalp, and A. T. Erdem, "Semi-automatic alpha plane generation by occlusion-adaptive mesh tracking," *IEEE Trans. Circ. and Syst. for Video Tech.*, vol. 10, no. 4, pp. 624-629, June 2000.
64. A. M. Tekalp and J. Ostermann, "Face and 2-D mesh animation in MPEG-4" *Signal Processing: Image Communication*, vol. 15, pp. 387-421, Jan. 2000.

65. M. Xia, E. Saber, G. Sharma, and A. M. Tekalp, "End-to-end color printer calibration by total least squares regression," *IEEE Trans. Image Processing*, vol. 8, no. 5, pp. 700-716, May 1999.
66. P. J.L. van Beek, A. M. Tekalp, N. Zhuang, I. Celasun, and M. Xia, "Hierarchical 2D mesh representation, tracking, and compression for object-based video," *IEEE Trans. Circ. and Syst. for Video Tech.*, vol. 9, no. 2, pp. 353-369, March 1999.
67. A. M. Ferman and A. M. Tekalp, "Efficient filtering and clustering methods for temporal video segmentation and visual summarization," *J. Vis. Comm. and Image Rep.*, vol. 9, no. 4 (special issue), pp. 336-351, Dec. 1998.
68. Z. Sun and A. M. Tekalp, "Trifocal motion modeling for object-based video compression and manipulation," *IEEE Trans. Circ. and Syst. for Video Tech.*, vol. 8, no. 5, pp. 667-685, Sept. 1998.
69. E. Saber and A. M. Tekalp, "Frontal-view face detection and facial feature extraction using color, shape, and symmetry-based cost functions," *Pattern Recognition Letters*, vol. 19, pp. 669-680, 1998.
70. Y. Altunbasak and A. M. Tekalp, "A hybrid video codec with block-based and mesh-based motion compensation modes," *Int. J. Imaging Syst. and Tech.*, vol. 9 (4), pp 248-256, Aug. 1998.
71. B. Gunsel, M. Ferman, and A. M. Tekalp, "Temporal video segmentation using unsupervised clustering and semantic object tracking," special issue of *J. Electronic Imaging*, vol. 7, no. 3, pp. 592-604, July 1998.
72. E. Saber and A. M. Tekalp, "Integration of color, shape, and texture for automatic image annotation and retrieval," *J. Electronic Imaging*, vol. 7, no. 3, pp. 684-700, July 1998.
73. B. Gunsel and A. M. Tekalp, "Shape similarity matching for query-by-example," *Patt. Recog.*, vol. 31, no. 7, pp. 931-944, July 1998.
74. A. M. Tekalp, P. J.L. van Beek, C. Toklu, and B. Gunsel, "2D mesh-based visual object representation for interactive synthetic/natural video," special issue of *Proc. IEEE*, vol. 86, no. 6, pp. 1029-1051, June 1998.
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Adaptation Strategies for Scalable Video Streaming
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17. Andrew J. Patti, Ph.D., December 1995 (University of Rochester)
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Eastman Kodak Company, moved to Virtual Scopics, Rochester, New York
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Thomson Consumer Electronics, moved to Momentum Inc.-Istanbul (1998)
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Identification and Restoration of Images
Based on Overall Modeling of the Imaging Process
Lucent Bell Laboratories
21. A. Tanju Erdem, Ph.D., July 1990 (University of Rochester)
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