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Visual Communications and Image Processing '90

Part 1

PROCEEDINGS

Visual Communications and Image Processing '90

Fifth in a Series

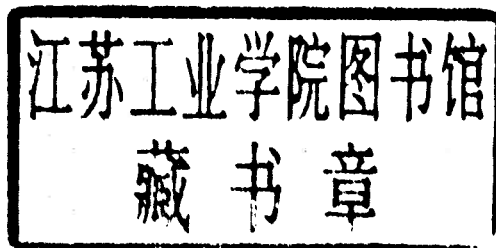
Murat Kunt
Chair/Editor

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VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

Session 1D—Mathematical Morphology and Fractals
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Session 1F—VLSI Implementation and System Architectures II
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Session 2A—Digital Image Processing in Medicine I
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Session 2B—Digital Image Processing in Medicine II
Goesta H. Granlund, Linköping University (Sweden)

Session 2C—HDTV
Jan Biemond, Delft University of Technology (Netherlands)

Session 2D—Parallel Processing
Jean-Jacques Dumont, Swiss Federal Institute of Technology (Switzerland)

Session 2E—Image Coding and Transmission I
Didier J. LeGall, C-Cube Microsystems (USA)

Session 2F—Image Coding and Transmission II
Kou-Hu Tzou, Bell Communications Research (USA)

Session 2G—Edge/Boundary Detection
Josef Bigün, Swiss Federal Institute of Technology (Switzerland)

Session 2H—Neuromorphology of Biological Vision I
Madan M. Gupta, University of Saskatchewan (Canada)

Session 2I—Neuromorphology of Biological Vision II
Madan M. Gupta, University of Saskatchewan (Canada)

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

Session 2J—Image Sequence Coding II

Andrew G. Tescher, Lockheed Palo Alto Research Laboratory (USA)

Session 2K—Image Sequence Processing

Fabio L. Rocca, Politecnico di Milano (Italy)

Session 3A—Segmentation/Classification

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M. Ibrahim Sezan, Eastman Kodak Company (USA)

Session 3D—Digital Image Processing

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Lance T. Wu, Industrial Technology Research Institute (Taiwan)

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Session 3G—Pattern Recognition

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Session 3H—Image Sequence Coding III

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INTRODUCTION

Because sounds and images are vital to communication, scientific and technical activities aimed at improving this communication grow at an astonishing rate. Support for visual communication alone has grown over the last half decade, with many different workshops growing into large conferences, including the well-established Picture Coding Symposium. SPIE's Visual Communications and Image Processing conference is one of this group and includes workshops on HDTV, 64-kbits video coding, and packet-video, to mention a few. Although each workshop is important enough to require a separate forum, the workshops remain closely related to each other and sometimes overlap unavoidably. With travel money for academics being finite, it is not reasonable to attend all the conferences and try to produce interesting and useful research results. In addition, the temptation to attend them all leads to a "write only" scientific community in which reading time is sacrificed. This led two years ago to the idea of bringing these meetings together into a large Visual Communications week (VISICOM) during which each workshop could have been one of the 4 or 5 parallel sessions with a much more coherent scientific program that would reduce overlap. Since a large number of these disparate workshops were held in Europe, the first VISICOM week could be held in the old continent.

The 1990 conference on Visual Communications and Image Processing attracted about 230 papers. We rejected 50 and the remaining 180 are separated into four parallel sessions to fit within the three-day program. A number of distinguished colleagues accepted my invitation to present double-length tutorials placed at the beginning of the corresponding session. Among them I am pleased to mention those by Professor R. M. Lea on a novel massively parallel architecture and its technology, Professor Y. Neuvo on median-based algorithms for image sequence processing, Dr. M. I. Sezan on image restoration, and Dr. F. Huck on information theoretical assessment of image gathering. I am most grateful to them for accepting my invitation. Image sequence processing and coding is the most popular area if judged by the number of papers contained in the four sessions on this topic. The other sessions focus on human visual system and neural networks, nonlinear image processing, mathematical morphology and fractals (honored by the chairmanship of Professor J. Serra), VLSI implementation and system architecture, hierarchical image and video coding, image processing in medicine, parallel processing, edge detection, neuromorphology of biological vision, HDTV, segmentation and classification, texture, JPEG/MPEG algorithms, and pattern recognition.

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

Special thanks are due to the members of the program committee and the session chairs, as well as to the talented members of my fantastic team. I would like to mention specially Drs. T. Reed, J. M. H. du Buf, J. Bigün, M. Kocher, T. George Campbell, T. Ebrahimi, A. Geurtz, C. Horne, F. Marquès, Ph. Salembier, J. M. Vesin, and J. Vidal. Without their invaluable help I could never have organized this conference.

Murat Kunt

Swiss Federal Institute of Technology (Switzerland)

CONTENTS

Conference Committee	xiv
Introduction	xvii

Part One

SESSION 1A	HUMAN VISUAL SYSTEM AND NEURAL-NETWORK-BASED PROCESSING
1360-01	Human visual quality criterion S. Comes, B. Macq, Univ. Catholique de Louvain (Belgium). 2
1360-02	Multiscale image coding using the Kohonen neural network M. Antonini, M. Barlaud, P. Mathieu, Univ. de Nice-Sophia Antipolis (France); J. C. Feauveau, Univ. Paris-Sud (France). 14
1360-03	Target cuing: a heterogeneous neural network approach H. M. McCauley, Naval Weapons Ctr. (USA). 27
1360-04	Bilevel quantization using dithering and Hopfield theory J. J. Hwang, M. H. Lee, Chonbuk National Univ. (Korea). 36
1360-05	New bidirectional neural network and application to binary image recognition S. Zhang, A. G. Constantinides, Imperial College of Science and Technology (UK); L. Zou, Xian Jiaotong Univ. (China). 41
1360-06	NNE-CA: the implementation of neural network emulator board K. Park, K. Cha, J. Choi, Chung-Ang Univ. (Korea). 49
1360-07	Multistaged neural network architecture for position invariant shape recognition J. I. Minnix, Stanford Telecommunications Inc. (USA); E. S. McVey, R. M. Iñigo, Univ. of Virginia (USA). 58
1360-08	Image compression using a neural network with learning capability of variable function of a neural unit R. Kohno, M. Arai, H. Imai, Yokohama National Univ. (Japan). 69
SESSION 1B	MASSIVELY PARALLEL COMPUTER ARCHITECTURES
1360-09	ASP: a parallel computing technology (Invited Paper) R. M. Lea, Brunel Univ. (UK). 78
1360-11	Benchmarking the ASP for computer vision A. Krikelis, Brunel Univ. and Aspex Microsystems Ltd. (UK). 92
1360-12	SCC-100 parallel processor for real-time imaging W. J. Jacobi, W. B. Kendall, L. A. Wadsworth, Space Computer Corp. (USA). 104
1360-14	MEGA Node: an implementation of a coarse-grain totally reconfigurable parallel machine M. B. Blum, C. Burrer, Telmat Informatique (France). 109
SESSION 1C	NONLINEAR IMAGE PROCESSING
1360-16	Median-based algorithms for image sequence processing (Invited Paper) B. Alp, P. Haavisto, T. Jarske, K. Oistämö, Y. Neuvo, Tampere Univ. of Technology (Finland). 122
1360-17	Nonlinear quincunx interpolation filtering A. Lehtonen, M. Renfors, Nokia Research Ctr. (Finland). 135

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-18	Minimax optimization over the class of stack filters M. Gabbouj, E. J. Coyle, Purdue Univ. (USA).	143
1360-19	Morphological filtering of noisy images L. Koskinen, J. Astola, Tampere Univ. (Finland); Y. Neuvo, Tampere Univ. of Technology (Finland).	155
1360-20	Morphological filtering and iteration H. J. Heijmans, Ctr. for Mathematics and Computer Science (Netherlands).	166
1360-21	Quantitative comparison of median-based filters T. G. Campbell, J. M. H. du Buf, Swiss Federal Institute of Technology (Switzerland).	176
1360-22	Nonlinear spatial filtering of FLIR images M. J. Pérez-Luque, C. Muñoz, N. García, Univ. Politécnica de Madrid (Spain).	188
SESSION 1D MATHEMATICAL MORPHOLOGY AND FRACTALS		
1360-23	Links: definition and properties J. Serra, Ecole des Mines de Paris (France).	202
1360-24	Minimal search for the optimal mean-square digital gray-scale morphological filter E. R. Dougherty, Rochester Institute of Technology (USA).	214
1360-25	Fractal image coding based on a theory of iterated contractive image transformations A. E. Jacquin, Georgia Institute of Technology (USA).	227
1360-26	Determining watersheds in digital pictures via flooding simulations P. Soille, L. Vincent, Ecole des Mines de Paris (France).	240
1360-27	Digital euclidean skeletons F. Meyer, Ecole des Mines de Paris (France).	251
1360-28	Mathematical morphology on the sphere J. B. Roerdink, Ctr. for Mathematics and Computer Science (Netherlands).	263
1360-29	Antiskeleton: some theoretical properties and application M. Schmitt, Thomson-CSF (France).	272
1360-30	Image mosaic and interpolation by multiresolution morphological pyramids S. Pei, H. Tsai, National Taiwan Univ. (Taiwan).	284
1360-31	Subband image decomposition by mathematical morphology S. Pei, National Taiwan Univ. (Taiwan); F. Chen, National Taiwan Institute of Technology (Taiwan).	293
SESSION 1E VLSI IMPLEMENTATION AND SYSTEM ARCHITECTURES I		
1360-32	Reconfigurable architecture for real-time 3-D parameter estimation from image sequences F. M. Hugen, M. J. Korsten, Z. Houkes, Univ. of Twente (Netherlands).	304
1360-33	Real-time VLSI architecture for geometric image transformations M. Zhao, J. Gobert, Labs. d'Electronique Philips (France); O. Schirvanian, N. Demassieux, Télécom Paris Univ. (France).	316
1360-34	CCD focal-plane real-time image processor E. Eid, E. R. Fossum, Columbia Univ. (USA).	327
1360-35	Mapping technique for VLSI/WSI implementation of multidimensional systolic arrays M. B. Abdelrazik, Brunel Univ. (UK).	332
1360-36	Mixed digital/analog VLSI array architectures for image processing M. Soma, T. Alexander, Univ. of Washington (USA).	341

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-37	Modular Image Processor: an efficient chip set for real-time image processing H. Waldburger, J. Dufour, G. Concordel, Thomson-TRT Défense (France).	349
1360-38	Analog parallel processor hardware for high-speed pattern recognition T. Daud, R. Tawel, H. Langenbacher, S. P. Eberhardt, A. P. Thakoor, Jet Propulsion Lab. (USA).	359
1360-39	Foveating vision systems architecture: image acquisition and display Y. Y. Zeevi, R. Ginosar, Technion—Israel Institute of Technology (Israel).	371
SESSION 1F VLSI IMPLEMENTATION AND SYSTEM ARCHITECTURES II		
1360-40	Parallel architecture for real-time video communication L. A. de Sá, V. M. Silva, F. Perdigão, S. Faria, P. Assunção, Univ. of Coimbra (Portugal).	380
1360-41	VLSI components for a 560-Mbit/s HDTV codec K. Grüger, P. Pirsch, Univ. Hannover (FRG); J. Kraus, J. Reimers, Deutschen Bundespost TELEKOM (FRG).	388
1360-42	VLSI architectures for the hierarchical block-matching algorithm for HDTV applications L. De Vos, Siemens AG (FRG).	398
1360-43	VLSI architecture and implementation of a multifunction, forward/inverse discrete cosine transform processor M. Maruyama, H. Uwabu, I. Iwasaki, H. Fujiwara, T. Sakaguchi, Graphic Communication Technologies, Ltd. (USA); M. Sun, M. L. Liou, Bell Communications Research (USA).	410
SESSION 1G 3-D IMAGE PROCESSING		
1360-44	Determining vanishing points using Hough transform E. Lutton, H. Maître, J. Lopez-Krahe, Télécom Paris (France).	420
1360-45	Monocular correspondence detection for symmetrical objects by template matching G. Vilmar, P. W. Besslich, Univ. of Bremen (FRG).	431
1360-46	3-D reconstruction using a limited number of projections C. Klifa, Télécom Paris (France); B. Lavayssière, EDF-DER (France).	443
1360-47	Mathematical morphology for 3-D object segmentation and partial matching I. Bloch-Boulanger, Télécom Paris and Rhône-Poulenc Santé (France); H. Maître, F. J. Schmitt, Télécom Paris (France).	455
SESSION 1H IMAGE SEQUENCE CODING I		
1360-48	Motion estimation for coding of moving video at 8 kbit/s with Gibbs-modeled vectorfield smoothing C. Stiller, Aachen Univ. of Technology (FRG).	468
1360-49	Some variants of universal pattern-matching interframe coding T. Saito, R. Abe, T. Komatsu, Kanagawa Univ. (Japan); H. Harashima, Univ. of Tokyo (Japan).	477
1360-50	Video coding using a pyramidal Gabor expansion T. Ebrahimi, T. R. Reed, Ecole Polytechnique Federale de Lausanne (Switzerland); M. Kunt, Swiss Federal Institute of Technology (Switzerland).	489
1360-51	Block testing in a variable resolution spatially interpolative moving image sequence coder P. J. Cordell, R. J. Clarke, Heriot-Watt Univ. (UK).	503
1360-52	Effective exploitation of background memory for coding of moving video using object mask generation W. Guse, RWTH Aachen (FRG); M. Gilge, International Computer Science Institute (FRG); B. Hürtgen, RWTH Aachen (FRG).	512

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-54	Very low rate coding of motion video using 3-D segmentation with two change-detection masks S. Lee, N. Kim, H. Son, Kyungpook National Univ. (Korea).....
1360-55	Visual pattern image sequence coding P. Silsbee, A. C. Bovik, D. Chen, Univ. of Texas/Austin (USA).
SESSION 1I	HIERARCHICAL VIDEO CODING
1360-56	Subband coding of video employing efficient recursive filter banks and advanced motion compensation J. H. Husoy, H. Gronning, T. A. Ramstad, Norwegian Institute of Technology (Norway).
1360-57	Interframe hierarchical address-vector quantization N. M. Nasrabadi, Worcester Polytechnic Institute (USA).
1360-58	Refinement system for hierarchical video coding F. Bosveld, R. L. Lagendijk, J. Biemond, Delft Univ. of Technology (Netherlands).....
1360-59	Design of an HDTV subband codec considering CMOS-VLSI constraints U. Pestel, B. Schmale, Univ. Hannover (FRG).
SESSION 1J	HIERARCHICAL IMAGE CODING
1360-60	Image subband coding using an efficient recursive filter bank with complex signals H. Gronning, J. H. Husoy, T. A. Ramstad, Norwegian Institute of Technology (Norway).
1360-61	Perfect reconstruction binomial QMF-wavelet transform A. N. Akansu, New Jersey Institute of Technology (USA); R. A. Haddad, Polytechnic Univ. (USA); H. Caglar, New Jersey Institute of Technology (USA).
1360-62	Generalized quad-trees: a unified approach to multiresolution image analysis and coding R. Wilson, M. Todd, Univ. of Warwick (UK); A. D. Calway, Linköping Univ. (Sweden).
1360-63	Three-dimensional adaptive Laplacian pyramid image coding S. Sallent, L. Torres, L. Gils, ETSI Telecomunicación (Spain).
1360-184	Image representation using binary space partitioning trees H. Radha, AT&T Bell Labs. and Columbia Univ. (USA); R. Leonardi, B. Naylor, AT&T Bell Labs. (USA); M. Vetterli, Columbia Univ. (USA).
 Part Two	
SESSION 2A	DIGITAL IMAGE PROCESSING IN MEDICINE I
1360-66	Three-dimensional reconstruction and lateral views in optical microscopy T. Tommasi, B. Bianco, V. Murino, A. Oneto, A. Diaspro, Univ. of Genoa (Italy).
1360-67	Improved resolution of medical 3-D x-ray computed-tomographic images C. Odet, G. Jacquemod, F. Peyrin, R. Goutte, INSA (France).
1360-68	Extraction of morphometric information from dual echo magnetic resonance brain images T. Sandor, F. A. Jolesz, J. Tieman, R. Kikinis, M. LeMay, M. Albert, Harvard Medical School (USA).
1360-70	Diagnostic digital image processing of human corneal endothelial cell patterns B. R. Masters, Georgia Institute of Technology (USA).
1360-71	Region-oriented 3-D segmentation of NMR datasets: a statistical model-based approach T. Aach, H. Dawid, RWTH Aachen (FRG).
1360-72	Enhancement and segmentation for NMR images of blood flow in arteries G. Yang, P. Burger, Imperial College of Science, Technology and Medicine (UK).

360-37	DIGITAL IMAGE PROCESSING IN MEDICINE II	
	Analysis of x-ray hand images for bone age assessment	
360-38	J. Serrat, J. Vitrià, J. J. Villanueva, Univ. Autònoma de Barcelona (Spain).	716
	ITS: a practical picture archiving and communication system	
360-39	T. Lei, W. Sewchand, Univ. of Maryland School of Medicine (USA).	724
	Open system architecture for distributed image-reference database in radiological applications	
ON	A. Bellini, G. Bucci, Univ. di Firenze (Italy).	726
136	HDTV	
	Motion field restoration using vector median filtering on high-definition television sequences	
L	T. Koivunen, A. Nieminen, Nokia Consumer Electronics (Finland).	736
	Motion-adaptive four-channel HDTV subband/DCT coding	
79	G. Schamel, Heinrich-Hertz-Institut für Nachrichtentechnik (FRG).	743
	Compression and channel-coding algorithms for high-definition television signals	
0-80	L. Alparone, G. Benelli, A. F. Fabbri, Univ. di Firenze (Italy).	754
0-81	Source coding of HDTV with compatibility to TV	
	M. Breeuwer, P. H. de With, Philips Research Labs. (Netherlands).	765
N 2D	PARALLEL PROCESSING	
0-82	Xputer use in image processing and digital signal processing	
	R. W. Hartenstein, A. G. Hirschbiel, K. Lemmert, M. Riedmüller, K. Schmidt, M. Weber, Univ. Kaiserslautern (FRG).	778
0-83	Parallel architectures for the postprocessing of SAR images	
	L. Alparone, F. Boragine, S. Fini, F. de Stefani, Univ. di Firenze (Italy).	790
0-85	Transputer-based embedded system for METEOSAT image data compression	
	M. H. Versteeg, R. A. Hogendoorn, A. Monkel, National Aerospace Lab. NLR (Netherlands).	803
N 2E	IMAGE CODING AND TRANSMISSION I	
0-86	Source coding of super high definition images with discrete cosine transform	
	M. Nomura, T. Fujii, N. Ohta, NTT Transmission Systems Labs. (Japan).	814
0-87	New variable-rate VQ coding scheme apply in HDTV	
	Y. Feng, Prime Computervision (USA); K. Zhang, Worcester Polytechnic Institute (USA).	826
0-88	Clustering algorithm for entropy-constrained vector-quantizer design	
	W. A. Finamore, D. P. de Gárrido, IBM/Rio Scientific Ctr. (Brazil); W. A. Pearlman, Rensselaer Polytechnic Institute (USA).	837
0-89	Variable block-sized vector quantization of gray-scale images with unconstrained tiling	
	J. L. Boxerman, Massachusetts Institute of Technology (USA); H. J. Lee, Tetra Systems Inc. (USA).	847
N 2F	IMAGE CODING AND TRANSMISSION II	
0-90	New technique of linear-phase QMF filter design for subband coding	
	J. Jeon, J. Kim, Korea Advanced Institute of Science and Technology (Korea).	860
0-91	Gain-adaptive trained transform trellis code for images	
	D. Kim, W. A. Pearlman, Rensselaer Polytechnic Institute (USA).	868

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-92	DS-DCT: the double-shift DCT image coding for low-bit-rate image transmission D. Cai, Institute of Electronics (China); Y. Chen, Univ. of Tokyo (Japan).	879
1360-93	Efficient error-resilient codes for sparse image coefficients N. Cheng, N. G. Kingsbury, Univ. of Cambridge (UK).	888
1360-94	Optimum quantization for subband coders L. Vandendorpe, B. Macq, Univ. Catholique de Louvain (Belgium).	898
1360-95	Statistical dependence between orientation filter outputs used in a human-vision-based image code B. Wegmann, C. Zetsche, Technische Univ. München (FRG).	909
1360-96	Coding gains of pyramid structures in progressive image transmission S. H. Park, S. U. Lee, Seoul National Univ. (Korea).	924
1360-97	Image data compression using hybrid POLA-VQ technique C. Lee, Ministry of Communications (Taiwan); R. Ju, Ministry of Communications and National Central Univ. (Taiwan); T. Liu, Ministry of Communications (Taiwan); B. Jeng, Ministry of Communications and National Central Univ. (Taiwan); J. Huang, K. Kan, Ministry of Communications (Taiwan).	936
SESSION 2G	EDGE/BOUNDARY DETECTION	
1360-99	Object contours and boundaries in color images R. Ronfard, Ecole des Mines de Paris and Télécom Paris (France).	946
1360-100	Attributed tree data structure for representing the descriptions of object contours in images Z. Ren, W. Ameling, Technische Hochschule Aachen (FRG); P. J. Jensch, Univ. Oldenburg (FRG).	956
1360-101	Two design techniques for 2-D FIR LoG filters P. Siohan, D. Pelé, V. Ouvrard, CCETT (France).	970
1360-102	Adaptable edge quality metric R. N. Strickland, D. K. Chang, Univ. of Arizona (USA).	982
SESSION 2H	NEUROMORPHOLOGY OF BIOLOGICAL VISION I	
1360-103	Neuromorphology of biological vision: a basis for machine vision M. M. Gupta, Univ. of Saskatchewan (Canada).	998
1360-104	Color-subspace-based color-coordinate system J. P. Parkkinen, Univ. of Kuopio (Finland) and Univ. of Iowa (USA); J. Hallikainen, T. Jaaskelainen, Univ. of Kuopio (Finland).	1010
1360-105	GRUPO: a 3-D structure recognition system S. T. Acton, A. C. Bovik, Univ. of Texas/Austin (USA).	1018
SESSION 2I	NEUROMORPHOLOGY OF BIOLOGICAL VISION II	
1360-106	Global stability in nonlinear lateral inhibition G. F. McLean, Univ. of Victoria (Canada); M. E. Jernigan, Univ. of Waterloo (Canada).	1032
1360-107	Dynamic neural network for visual memory M. M. Gupta, G. K. Knopf, Univ. of Saskatchewan (Canada).	1044
1360-108	Binocular fusion inferences in a log-polar decision space N. C. Griswold, N. Kehtarnavaz, Texas A&M Univ. (USA).	1056
1360-109	Dense color stereo J. R. Jordan III, A. C. Bovik, Univ. of Texas/Austin (USA).	1069

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-111	Image invariance with changes in distance: the effect of a nonuniform visual system E. Peli, Eye Research Institute and Harvard Medical School (USA); J. Yang, Northeastern Univ. (USA); R. B. Goldstein, Eye Research Institute and Harvard Medical School (USA).	1079
SESSION 2J	IMAGE SEQUENCE CODING II	
1360-112	Coding of moving video at 1 mbit/s: movies on CD B. Hürtgen, RWTH Aachen (FRG); M. Gilge, International Computer Science Institute (FRG); W. Guse, RWTH Aachen (FRG).	1092
1360-113	Vector quantization with 3-D gradient motion compensation C. Lee, M. Nadler, Virginia Polytechnic Institute and State Univ. (USA).	1104
1360-114	Two-layers constant-quality video coding for ATM environments F. M. Pereira, Instituto Superior Técnico (Italy); L. Masera, Centro Studi e Lab. Telecomunicazioni (Italy).	1114
1360-115	Image sequence representation using polar-separable filters T. G. Campbell, T. R. Reed, M. Kunt, Swiss Federal Institute of Technology (Switzerland).	1126
1360-117	Visual model weighted DCT vector quantization for variable bit-rate video coding F. Lavagetto, S. Zappatore, Univ. di Genova (Italy).	1134
1360-118	Encoding of sign language image sequences at very low rate C. Huang, C. H. Wu, National Tsing Hua Univ. (Taiwan).	1140
1360-119	Real-time facial action image synthesis system driven by speech and text S. Morishima, Seikei Univ. (Japan); K. Aizawa, H. Harashima, Univ. of Tokyo (Japan).	1151
1360-120	Image modeling for digital TV codecs J. Leduc, Univ. Catholique de Louvain (Belgium).	1160
1360-121	Video signal processing using vector median K. Oistämö, Y. Neuvo, Tampere Univ. of Technology (Finland).	1171
1360-123	Image analysis for face modeling and facial image reconstruction H. Agawa, G. Xu, Y. Nagashima, F. Kishino, ATR Communication Systems Research Labs. (Japan).	1184
1360-124	General motion estimation and segmentation S. Wu, J. Kittler, Univ. of Surrey (UK).	1198
1360-126	Adaptive algorithms for pel-recursive displacement estimation L. Böröczky, Technical Univ. of Budapest (Hungary); J. N. Driessen, J. Biemond, Delft Univ. of Technology (Netherlands).	1210
1360-127	Distributed detection methods for displacement estimation S. N. Efstratiadis, A. K. Katsaggelos, Northwestern Univ. (USA).	1222
1360-180	Control analysis of video packet loss in ATM networks D. Lee, Columbia Univ. (USA); K. Tzou, Bell Communications Research (USA); S. Li, Univ. of Texas/Austin (USA).	1232

Part Three

SESSION 3A	SEGMENTATION/CLASSIFICATION	
1360-128	Surface defect detection using adaptive image modeling P. Salembier, Swiss Federal Institute of Technology (Switzerland).	1246
1360-129	Thresholding three-dimensional image Y. J. Zhang, J. J. Gerbrands, E. Backer, Delft Univ. of Technology (Netherlands).	1258

(continued)

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-130	Edge point/region cooperative segmentation specific to 3-D scene reconstruction application P. Bonnin, Etablissement Technique Central de l'Armement (France); B. Zavidovique, ETCA and Univ. de Paris XI (France).	1270
1360-131	Sequential classification into m multivariate populations using the information based on small samples N. A. Nechval, Civil Aviation Engineers Institute (USSR).	1282
SESSION 3B TEXTURE		
1360-132	Adaptive classification of textured images using moments and autoregressive models L. Sukissian, A. Tirakis, S. Kollias, National Technical Univ. of Athens (Greece).	1296
1360-133	Classification of textures in aerial images G. Brunet, J. Devars, ENSEA (France).	1307
1360-134	Frequency and orientation selective texture measures using linear symmetry and Laplacian pyramid J. Bigün, Swiss Federal Institute of Technology (Switzerland).	1319
1360-135	Texture classification using transform vector quantization G. F. McLean, Univ. of Victoria (Canada).	1332
SESSION 3C IMAGE RESTORATION		
1360-136	Tutorial review of recent developments in digital image restoration (Invited Paper) M. I. Sezan, Eastman Kodak Co. (USA); A. M. Tekalp, Univ. of Rochester (USA).	1346
1360-137	Maximum-likelihood blur identification R. L. Lagendijk, J. Biemond, Delft Univ. of Technology (Netherlands).	1360
1360-138	Optimal constraint parameter estimation for constrained image restoration S. J. Reeves, Auburn Univ. (USA); R. M. Mersereau, Georgia Institute of Technology (USA).	1372
1360-139	Multiple input adaptive image restoration algorithms A. K. Katsaggelos, Northwestern Univ. (USA).	1381
1360-140	Robust estimation of local orientations in images using a multiresolution approach R. Wilson, Univ. of Warwick (UK); S. C. Clippingdale, NHK Science and Technical Research Labs. (Japan); A. H. Bhalerao, Univ. of Warwick (UK).	1393
1360-141	Image restoration using biorthogonal wavelet transform J. M. Bruneau, M. Barlaud, P. Mathieu, Univ. de Nice-Sophia Antipolis (France).	1404
1360-142	Stochastic model-based approach for simultaneous restoration of multiple misregistered images C. Srinivas, General Electric Corporate Research and Development (USA); M. D. Srinath, Southern Methodist Univ. (USA).	1416
1360-143	Optical methods for iterative image restoration A. K. Katsaggelos, T. E. DeRoux, M. E. Marhic, Northwestern Univ. (USA).	1428
SESSION 3D DIGITAL IMAGE PROCESSING		
1360-144	Stability analysis of multichannel linear-predictive systems Y. Öztürk, Ege Univ. Izmir (Turkey) and San Diego State Univ. (USA); H. Abut, San Diego State Univ. (USA).	1442
1360-145	Group delay equalization of multidimensional recursive filters F. T. Tehrani, R. E. Ford, California State Univ./Fullerton (USA).	1454

VISUAL COMMUNICATIONS AND IMAGE PROCESSING '90

Volume 1360

1360-146	Perceptually relevant model for aliasing in the triplet-stripe filter CCD image sensor R. A. Beuker, Philips Research Labs. (Netherlands); F. W. Hoeksema, Univ. of Twente (Netherlands).	1463
1360-147	Gram-Gabor approach to optimal image representation M. Porat, Y. Y. Zeevi, Technion—Israel Institute of Technology (USA).	1474
1360-148	Fast method of geometric picture transformation using logarithmic number systems and its applications for computer graphics T. Kurokawa, Aichi Institute of Technology (Japan); T. Mizukoshi, Oki Technosystems Lab. (Japan).	1479
1360-149	Space-variant filtering of images through a hybrid implementation of the Wigner distribution function C. Gonzalo, Instituto de Optica (Spain).	1491
1360-150	Curved shadow generation by ray tracing in the plane A. Tokuta, Univ. of South Florida (USA).	1499
1360-151	Computation network for visible surface reconstruction H. Hsieh, W. Chang, National Chiao Tung Univ. (Taiwan).	1504
SESSION 3E JPEG/MPEG ALGORITHMS AND IMPLEMENTATION		
1360-152	Color image transmission system for prepress with ADCT compression algorithm H. Hasegawa, M. Sugiura, H. Ono, N. Kurakami, T. Omachi, NEC Corp. (Japan).	1518
1360-153	Design of a multifunction video decoder based on a motion-compensated predictive-interpolative coder K. Yang, S. Singhal, Bell Communications Research (USA); D. J. Le Gall, C-Cube Microsystems (USA).	1530
1360-155	Video coding for digital storage media using hierarchical intraframe scheme K. Kamikura, H. Watanabe, NTT Human Interface Labs. (Japan).	1540
1360-156	Principal devices and hardware volume estimation for moving picture decoder for digital storage media M. Konoshima, O. Kawai, K. Matsuda, Fujitsu Labs. Ltd. (Japan).	1551
1360-183	Comparing motion-interpolation structures for video coding A. Puri, R. Aravind, AT&T Bell Labs. (USA).	1560
1360-185	Encoding of motion video sequences for the MPEG environment using arithmetic coding E. Viscito, C. A. Gonzales, IBM/Thomas J. Watson Research Ctr. (USA).	1572
SESSION 3F VISION SCIENCE AND TECHNOLOGY FOR SPACE		
1360-157	Digital image gathering and minimum mean-square error restoration S. K. Park, College of William and Mary (USA); S. E. Reichenbach, Univ. of Nebraska (USA).	1578
1360-158	Information theoretical assessment of image gathering and coding for digital restoration (Invited Paper) F. O. Huck, NASA/Langley Research Ctr. (USA); S. John, Science and Technology Corp. (USA); S. E. Reichenbach, Univ. of Nebraska (USA).	1590
1360-159	Image coding by edge primitives R. Alter-Gartenberg, Old Dominion Univ. (USA); R. Narayanswamy, Science and Technology Corp. (USA).	1608
1360-160	Photon detection with parallel-asynchronous processing D. D. Coon, A. G. Perera, Microtronics Associates, Inc. (USA).	1620

(continued)