ADVANCE PROGRAM

THE THIRD INTERNATIONAL JOINT CONFERENCE ON

PATTERN RECOGNITION

NOVEMBER 8-11, 1976, CORONADO, CALIFORNIA

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MONDAY November 8, 1976

MONDAY MORNING (Parallel Sessions)
SESSION 1A: INDUSTRIAL APPLICATIONS
Chairman: R.A. Kirsch, USA; T. Vamos, Hungary
"An Application of Computer Vision to Automated IC Chip Manufacture," M.L. Baird, USA
"Machine Recognition of Abnormal Behavior in Nuclear Reactors," R.C. Gonzalez and L.C. Howington, USA
"An Experimental Visually Controlled Pick and Place Machine for Industry," P. Saraga and D.R. Skoyles, UK
"Characterizing Distributed Parameter Systems by Pattern Recognition," T. Simundich, USA
"Pattern Classification by Color Effect Method," T. Ito, Japan
"Edge Detection by a Laser Beam," T. Vamos and L. Mer, Hungary
"Feature Extraction Through Least Squares Fit to a Simple Model," H.B. Demuth, USA
SESSION 1B: FEATURE EXTRACTION AND PRIMITIVE SELECTION
Chairman: M. Aliserman, USSR; T. Cover, USA
"On a Nonlinear Feature Extraction," K. Fukunaga, USA and S. Ando, Japan
"Tree of Eigen-Value of Two-Dimensional Figure," T. Ishiketa, Japan
"Overall Classification from Zonal Classification," E.L. Hall and J. Smith, USA
"A Nonlinear Method of Feature Selection for Stationary Pattern Vectors," J. Kittler, UK
"Lifting Properties of Projectors in Pattern Recognition Categories," M. Pavel, France
SESSION 1C: SYNTACTIC METHODS IN PATTERN ANALYSIS
Chairman: R. Narasimhan, India; R.S. Ledley, USA
"Inference for Transition Network Grammars," S.M. Chou and K.S. Fu, USA
"A Supervised Learning Technique to Identify Short Natural Language Sentences," D. Couton and D. Kayser, France
"Grammatical Inference Based on Pattern Recognition," G.B. Porter, USA

"A Parsing Algorithm for Imperfect Patterns and Its Application," R. Mohr and J.P. Haton, France
"Syntactic Feature Extraction for Shape Recognition," T. Pavlidis, USA
"Inference of Regular Expressions," L. Miclet, France

MONDAY AFTERNOON (Parallel Sessions)
SESSION 2A: OPTICAL CHARACTER RECOGNITION I
Chairman: J.C. Simon, France
"Optimal Information Economy in the Multifont OCR Input System," O. Albertsen, E. Muenster, and P. Ponsing, Denmark
"Extraction of the Most Probable Entry from a Directory," M. Nadler, France
"Imprinted Character Recognition Using Template Matching on Spatial Complex Frequency Plane – Especially for Katakana Letters and Numerals," K. Tanaka and K. Otsawa, Japan
SESSION 2B: LEARNING ALGORITHMS AND SAMPLE SIZE
Chairman: Ya. Z. Tsypkin, USSR; R.O. Duda, USA
"Learning Algorithms for Discriminant Function Solution of the Minimum Error Classification Problem," H.D. Tu, Belgium
"A Sample Size Dependent Error Bound," R.P.W. Duin, The Netherlands
"On Dimensionality, Learning Sample Size, and Complexity of a Statistical Classification Algorithm," S. Raudys, USSR
"Optimal Hypothesis Generation Learning from Examples," J.C. Stoffel, USA
"Further Report on Coalescence Model of Clustering," S. Watanabe, USA

Including a Special
One-day Symposium on
COMPUTER-AIDED DIAGNOSIS
OF MEDICAL IMAGES

August 1976
SESSION 8B: SPEECH RECOGNITION
Chairman: K.S. Fu, USA; J.I. Nagumo, Japan

"Automatic Extraction of Distinctive Features from Continuous Speech,"
R. Da Moro and P. Lades, Italy

"Approximation Techniques for the Learning of Sequential Symbolic Patterns," M.S. Fox and F. Hayes-Roth, USA

"Speech Understanding System LITHAN and Some Applications," T. Sakai and S. Nakagawa, Japan

"Word Recognition in Multi-Talker Environment Using Syntactic Methods,"
R.L. Kashyap and M.C. Mittal, USA

"Phonetic String Retrieval Using Imperfectly Labeled Prototypes," S.K. Chang, USA

SESSION 6C: OPTICAL CHARACTER RECOGNITION II
Chairman: M. Nadler, France

"Numerical Comparison of Similarly Structured Data Perturbed by Random Variations, as Found in Handwritten Signatures," C. Strangio, USA

"The Recognition of Handprinted Characters Including 'Katakana', 'alphabets,' and 'numerals'," M. Yoshida, K. Iwata, E. Yamamoto, T. Matsui and K. Kabayama, Japan

"The GRAFX I System and Its Application to Optical Character Recognition," A. Griffith, USA


"Structural Recognition of Handwriting," E. Hildai, T. Ericson, and S. Vestol, Norway

"Structural Codes for Omnifont and Handwritten Characters," M. Nadler, France

"Multifont Word Recognition System with Application to Postal Address Reading," Schurmann, Fed. Rep. Germany

THURSDAY November 11, 1976

THURSDAY MORNING (Parallel Sessions)

SESSION 7A: REMOTE SENSING
Chairman: R.M. Herald, USA

"Agricultural Land Use Classification of Aerial Photographs by Histogram Similarity Methods," M. Nagao, H. Tanabe, and K. Ito, Japan

"Stability and Dimensionality of Kharunen-Loeve Multispectral Image Expansions," A. Lowetz and E. Maitre, France


"What Can a Histogram Really Tell the Classifier?" G. Lebourcher and G. Lowitz, France

"Modeling of Two-Dimensional Signals with Applications to Image Restoration," T. Assefi, USA

SESSION 7B: PARALLEL PROCESSING AND TWO-DIMENSIONAL DIGITAL FILTERING
Chairman: K. Preston, Jr., USA; R. Bajczy, USA

"Comparing Sequential and Parallel Processing of Pictures," L. Cordella, M.J.B. Duff, and S. Levaldi, Italy

"Automatic Recognition of Three-Dimensional Shape by New Type of Moire Methods," M. Ideawa, T. Yaragi, T. Soma, and E. Goto, Japan


"Computation of Reachable and Observable Realizations of Spatial Filters," E. Fornasin and G. Marchesini, Italy

"Theoretical Analysis of Parallel Processing of Pictures Using Algebraic Properties of Picture Space and Operator Space," S. Yokoi, J. Toriwaki and T. Fukumura, Japan

"Clip 4: A Large Scale Integrated Circuit Array Parallel Processor," M.J.B. Duff, UK

"Shape Descriptors and Shape Finding for Biological Objects," B.I. Soroka and R. Bajczy, USA

SESSION 7C: EDGE, LINE, AND OBJECT RECOGNITION
Chairman: C.K. Chow, USA; L.P. Yaroslavski, USSR

"Multilevel Vision Recognition System," W.A. Perkins, USA

"One Pass Contouring of Images Through Planar Approximation," C. Sommerville and J. Mundy, USA

"Graph Labeling Algorithms for Picture Recognition," S. Tanimoto and T. Pavlidis, USA


"Inexact Pattern Matching in ESP," L.G. Shapiro, USA

"Detection of Elementary Features in a Picture by Nonlinear Local Numerical Processing," J. Hail, UK

"C-Set Calculus for Picture Analysis," E.R. Caianiello, E. Fischetti, and E.S. Vitulano, Italy

THURSDAY AFTERNOON (Parallel Sessions)

SESSION 8A: APPLICATIONS OF PATTERN RECOGNITION TECHNIQUES
Chairman: C.J.D.M. Verhagen, The Netherlands; C.H. Chen, USA

"Pattern Recognition of the Key-Hole Shaped Tumor Mounds," K. Ozawa, Japan

"Type Classification of Fingertips: A Syntactic Approach," K. Rado and K. Balck, Sweden

"Classification of Simple Objects Using Laser Range Finder Measurements," L. Pau and M. Delama, USA

"The Automatic Counting of Asbestos Fibers in Air Samples," T. Pavlidis and K. Stegiltz, USA

"An Algorithm for Extraction of More Than One Optimal Linear Feature from Several Gaussian Pattern Classes," R. De Figueiredo, K. Pau, A. Sagar, S. Starks, and D. Van Rooy, USA

"Nonlinear Prepartitioning and Zone Setting on Form Space in Automatic Recognition," M. Bourton, France

"Digital Image Analysis of Traffic Flow," M. Onoe and K. Ohba, Japan

SESSION 8B: IMAGE ANALYSIS AND TEXTURE
Chairman: M. Nagao, Japan

"Structure Lines of Images — A Differential Geometric Approach to the Feature Extraction," H. Enomoto and T. Katayama, Japan

"Partitioning and Coding a Two-Dimensional Field," A.J. Frank, USA

"Some Properties of Image Processing Operations on Projection Sets Obtained from Digital Pictures," A. Shiffrstein and Y.T. Chien, USA

"A Color Edge Detector," R. Nevatia, USA

"Computer Analysis of Color Information," T. Ito and M. Fukushima, Japan

"Interpretation of Scenes Consisting of Planar Geometrical Shapes,"

"Use of the Hure Transform and Some of Its Properties in Character Recognition," S. Wendling, G. Gagnon, and G. Stamon, France

SESSION 8C: DATA BASE COMPUTER SYSTEMS
Chairman: A. Guzman, Mexico

"Nondeterministic Data Base for Computerized Visual Perception," Y. Yakimovsly, USA

"Relaxation Labeling and the Reduction of Local Ambiguities," S.W. Zucker, USA

"A New Computer Image Processing Facility," C.E. Peterson, The Netherlands


"Shape-Oriented Image Classification, Storage, and Retrieval with Applications to Chromosomes and Leukocytes," E.T. Lee, USA

"The PICAP Picture Processing Laboratory," B. Kruse, Sweden
**ADVANCE REGISTRATION AND PUBLICATIONS ORDER FORM**

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<th>ADVANCE REGISTRATION</th>
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<td>(on or before Nov. 1, 1976)</td>
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<tr>
<td>□ Symposium on Computer-Aided Diagnosis of Medical Images (CADMI)</td>
<td>$20 member</td>
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<td>□ Pattern Recognition Conference and CADMI</td>
<td>$60 member</td>
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<td>□ Tour of UCI Pattern Recognition Project</td>
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Please ship me the proceedings indicated below.

| □ Proceedings of the 3rd International Joint Conference on Pattern Recognition | $18.75 | $25.00 |
| □ Proceedings of the 1976 Symposium on Computer-Aided Diagnosis of Medical Images | 9.00 | 12.00 |

My payment of $_____ is enclosed. (California residents add 6% sales tax.)

**STUDENT DISCOUNT** available for PATTERN RECOGNITION CONFERENCE ONLY (Fee: $25).

**NOTES:**
- Requests for refunds must be received in writing no later than November 1, 1976.
- COMPUTER-AIDED DIAGNOSIS SYMPOSIUM registration fee includes separately bound symposium proceedings.
- PATTERN RECOGNITION CONFERENCE registration fee includes both the conference proceedings and the symposium proceedings and provides you with 2 complimentary drink tickets for each of the conference hosted parties, Monday and Tuesday nights.

LATE REGISTRATIONS will be accepted at the conference hotel beginning Sunday evening, November 7, 1976.

**IEEE or IEEE COMPUTER SOCIETY Membership Number**

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