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## The Computer in Optical Research

Methods and Applications

Editor: B. R. Frieden

1980. 92 figures, 13 tables. XIII, 371 pages  
(Topics in Applied Physics, Volume 41)  
ISBN 3-540-10119-5

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## Image Reconstruction from Projections

Implementation and Applications

Editor: G. T. Herman

1979. 120 figures, 10 tables. XII, 284 pages  
(Topics in Applied Physics, Volume 32)  
ISBN 3-540-09417-2

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## Picture Processing and Digital Filtering

Editor: T. S. Huang

2nd corrected and updated edition. 1979.  
113 figures, 7 tables. XIII, 297 pages  
(Topics in Applied Physics, Volume 6)  
ISBN 3-540-09339-7

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## Two-Dimensional Digital Signal Processing I

Linear Filters

Editor: T. S. Huang

1981. 77 figures. X, 210 pages  
(Topics in Applied Physics, Volume 42)  
ISBN 3-540-10348-1

**Contents:** *T. S. Huang:* Introduction. - *R. M. Mersereau:* Two-Dimensional Nonrecursive Filter Design. *P. A. Ramamoorthy, L. T. Bruton:* Design of Two-Dimensional Recursive Filters. - *B. T. O'Connor, T. S. Huang:* Stability of General Two-Dimensional Recursive Filters. - *J. W. Woods:* Two-Dimensional Kalman Filtering.

## Two-Dimensional Digital Signal Processing II

Transform and Median Filters

Editors: T. S. Huang

1981. 49 figures. X, 222 pages  
(Topics in Applied Physics, Volume 43)  
ISBN 3-540-10359-7

**Contents:** *T. S. Huang:* Introduction. - *J. O. Eklundh:* Efficient Matrix Transposition. - *H. J. Nussbaumer:* Two-Dimensional Convolution and DFT Computation. - *S. Zohar:* Winograd's Discrete Fourier Transform Algorithm. - *B. I. Justusson:* Median Filtering: Statistical Properties. - *S. G. Tyan:* Median Filtering: Deterministic Properties.

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## Digital Pattern Recognition

Editor: K. S. Fu

2nd corrected and updated edition. 1980.  
59 figures, 7 tables. XI, 234 pages  
(Communication and Cybernetics,  
Volume 10)  
ISBN 3-540-10207-8

**Contents:** *K. S. Fu:* Introduction. - *T. M. Cover, T. J. Wagner:* Topics in Statistical Pattern Recognition. - *E. Diday, J. C. Simon:* Clustering Analysis. - *K. S. Fu:* Syntactic (Linguistic) Pattern Recognition. - *A. Rosenfeld, J. S. Weszka:* Picture Recognition. - *J. J. Wolf:* Speech Recognition and Understanding. - *K. S. Fu, A. Rosenfeld:* Recent Developments in Digital Pattern Recognition. - Subject Index.

## Digital Picture Analysis

Editor: A. Rosenfeld

1976. 114 figures, 47 tables. XIII, 351 pages  
(Topics in Applied Physics, Volume 11)  
ISBN 3-540-07579-8

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## Nonlinear Methods of Spectral Analysis

Editor: S. Haykin

1979. 45 figures, 2 tables. XI, 247 pages  
(Topics in Applied Physics, Volume 34)  
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T. Pavlidis

## Structural Pattern Recognition

1977. 173 figures, 13 tables. XII, 302 pages  
(Springer Series in Electrophysics,  
Volume 1)  
ISBN 3-540-08463-0

"... The book is well written and illustrated. An excellent feature of the book is that the author has tried to give detailed listings of the various algorithms so that they can be implemented in most high level computer languages without too much difficulty."

*Math. Reviews*

## Syntactic Pattern Recognition, Applications

Editor: K. S. Fu

1977. 135 figures, 19 tables. XI, 270 pages  
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Volume 14)  
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