ANNOTATED BIBLIOGRAPHY

The books listed in this bibliography range from the classic to the most recently published on image processing and machine vision. They are listed in order of publication year and include notes regarding their content.

Digital Image Processing
K. Castleman, Prentice Hall, 1996

Senior/graduate level imaging text with problems and projects. Excellent coverage with signal analysis, wavelets, optics, 3-D imaging and machine vision topics.

Two-Dimensional Imaging
R. C. Bracewell, Prentice Hall, 1995

Senior/graduate level imaging text with problems. Heavy emphasis on signal analysis. Chapter on synthetic aperture radar.

Pocket Handbook of Image Processing Algorithms in C
H. R. Myler and A. R. Weeks, Prentice Hall, 1993

Reference for a wide range of imaging algorithms. Tested C code for algorithms with cross-reference by class, subject, and algorithm name.

Computer Imaging Recipes in C
H. R. Myler and A. R. Weeks, Prentice Hall, 1993

Senior level imaging reference text with examples and emphasis on computer implementation. Book includes diskette with UCFImage© image processing software (DOS).

Digital Image Processing, 2nd Edition
R .C. Gonzalez and R. E. Woods, Addison-Wesley, 1992

Classic and widely used senior/graduate level imaging text with problems. Signal processing emphasis with good coverage of segmentation, representation, and recognition techniques.

Computer and Robot Vision, Volumes I and II
R. M. Haralick and L. G. Shapiro, Addison-Wesley, 1992

Graduate level machine vision text with problems. Extensive coverage of all aspects of machine vision.

The Image Processing Handbook
J. C. Russ, CRC Press, 1992

Reference imaging text with large number of continuous-tone images. Excellent coverage of color image processing and numerous examples of algorithms throughout book.

Vision, Instruction and Action
D. Chapman, MIT Press, 1991

MIT doctoral thesis in Artificial Intelligence. Describes a sophisticated integrated system that takes instruction, interprets its environment visually and plays video games on its own. Provides an implementation of a unified visual architecture in the machine.

Artificial Vision for Mobile Robots
N. Ayache, MIT Press, 1991

Research monograph on research into 2 and 3-D robot vision at INRIA. Complete coverage of 3-D vision system algorithms for sensing, representation, interpretation, and guidance.

Machine Vision and Digital Image Processing Fundamentals
L. Galbiati, Prentice Hall, 1990

Senior/vocational-level imaging text with problems. Good coverage of basic techniques with system design examples. Chapter on barcode analysis.

Nonlinear Digital Filters
I. Pitas and A. N. Venetsanopoulous, Kluwer Academic, 1990

Graduate level imaging text and reference. Extensive and thorough coverage of nonlinear digital filters. Performance evaluation of various filters described.

Digital Image Processing and Computer Vision
R. J. Schalkoff, John Wiley & Sons, 1989

Graduate level imaging text and reference. Strong math emphasis with artificial intelligence approaches to machine vision.

Digital Image Processing
W.K. Pratt, John Wiley & Sons, 1978
Third Edition, 1989

Classic graduate level imaging text and reference with problems. Extensive and thorough coverage of all aspects of image processing with emphasis on stochastic modeling.

The IR Handbook
W. Wolfe and G. Zeiss, eds., Office of Naval Research, U. S. Navy
3rd Printing, 1989

Classic reference book with sections on imaging and tracking systems.

Structured Matrix Image Processing
E. R. Dougherty and C. R. Giardina, Prentice Hall, 1987

Graduate level imaging text with problems. Matrix approach to imaging with strong math emphasis. Extensive coverage of morphological and topological operations.

Intelligence: The Eye, the Brain and the Computer
M. A. Fischler and O. Firshein, Addison-Wesley, 1987
Graduate level imaging text and reference. Extensive and thorough coverage of non-linear digital filters. Performance evaluation of various filters described.

Fundamentals of Interactive Computer Graphics
J. D. Foley and A. Van Dam, Addison-Wesley, 1984
Graduate level computer graphics text and reference. Extensive and thorough coverage of fundamentals of advanced computer graphics algorithms.

Computer Vision
D. H. Ballard and C. M. Brown, Prentice-Hall, 1982
Classic graduate level machine vision text and reference with problems. Math intensive with some emphasis on medical imagery. Has become somewhat dated and superseded by Haralick and Shapiro (see above).

Machine Perception
R. Nevatia, Prentice-Hall, 1982
Senior/graduate level machine vision text. Very well written and easy to follow.

Computer Image Processing and Recognition
E.L.Hall, Academic Press, 1979
Graduate level imaging text with problems. Somewhat math intensive with emphasis on photometric (physics-based) imaging.

Pattern Recognition and Scene Analysis
R. O. Duda and P. E. Hart, John Wiley & Sons, 1978
Classic graduate level machine vision text and reference with problems. Merged pattern recognition principles with machine vision techniques.

Digital Picture Processing, Vols. I and II
A. Rosenfeld & A. C. Kak, Academic Press, 1976
Graduate level imaging and machine vision texts and references with problems. Very math intensive with emphasis on images represented as stochastic processes. Volume I is image processing and Volume II concentrates on machine vision algorithms.

An Introduction to Morphological Image Processing
E. R. Dougherty, SPIE Press, 1993.
A general treatment of morphological image processing written for the practicing engineer. This book covers the classical techniques of morphological processing in an easy to read and understand fashion.

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Harley R. Myler is a Professor in the Department of Electrical and Computer Engineering at the University of Central Florida in Orlando. Dr. Myler did his graduate work at the Electronic Vision Analysis Laboratory at the New Mexico State University, earning the MSEE in 1981 and the doctorate in 1985. He is currently the Director of the Machine Intelligence and Imaging Laboratory at UCF and has published over 30 articles and four books in the areas of imaging science and engineering, computer programming, and architecture and engineering education. Dr. Myler is a member of SPIE, a senior member of the IEEE, a Tau Beta Pi eminent engineer and a member of Eta Kappa Nu.