

Contributors	vii
Preface	ix
Future Contributions	xi

Retrieval of Shape from Silhouette

Andrea Bottino and Aldo Laurentini

I. Introduction	1
II. The Visual Hull	5
III. Practical Object Reconstruction	57
Reference s	68

Projective Transforms on Periodic Discrete Image Arrays

Andrew Kingston and Imants Svalbe

I. Introduction	76
II. Discrete Projections in Continuous Space: A Review of CT Methodology	88
III. Discrete Radon Transform Formalisms	100
IV. Finite Radon Projection Angle Properties	122
V. The FRT Applied to Arrays of Higher Dimensions, Z^N	131
VI. Discrete Tomographic Reconstruction	137
VII. Image Analysis and Processing with the FRT	152
VIII. Applications of Redundancy in FRT Projections	161
IX. Future Directions	169
Acknowledgments	172
References	172

Ray Tracing in Spherical Interfaces Using Geometric Algebra

Quirino M. Sugon, Jr. and Daniel J. McNamara

List of Symbols	180
I. Introduction	181
II. Geometric Optics	186
III. Finite Skew Rays	196
IV. Paraxial Skew Rays	203
V. Finite Meridional Rays	215
VI. Summary and Conclusions	222
Acknowledgment	223
References	223

Prolate Spheroidal Wave Functions and Wavelets

Gilbert G. Walter

I. Introduction	226
II. Notation and Background	227
III. Some Properties of Prolate Spheroidal Wave Functions	236
IV. Discrete Wavelet Theory	244
V. Prolate Spheroidal Wavelets	251
VI. What's Wrong with Wavelets	262
VII. Two Applications	269
VIII. Higher Dimensions	282
References	293
Index	297