

CONTENTS

Preface	ix
BAYESIAN SPECTRUM AND CHIRP ANALYSIS E. T. Jaynes	1
ON ENTROPY RATE Athanasios Papoulis	39
STATE SPACES AND INITIAL ESTIMATES IN MINIMUM RELATIVE-ENTROPY INVERSION WITH APPLICATION TO SPECTRUM ANALYSIS AND IMAGE ENHANCEMENT John E. Shore	51
RELATIVE-ENTROPY MINIMIZATION WITH UNCERTAIN CONSTRAINTS: THEORY AND APPLICATION TO SPECTRUM ANALYSIS Rodney W. Johnson	57
A PROOF OF BURG'S THEOREM B. S. Choi and Thomas M. Cover	75
A BAYESIAN APPROACH TO ROBUST LOCAL FACET ESTIMATION Robert M. Haralick	85
THE MAXIMUM ENTROPY METHOD: THE PROBLEM OF MISSING DATA William I. Newman	99
ON THE ACCURACY OF SPECTRUM ANALYSIS OF RED NOISE PROCESSES USING MAXIMUM ENTROPY AND PERIODOGRAM METHODS: SIMULATION STUDIES AND APPLICATION TO GEOPHYSICAL DATA Paul F. Fougere	127
RECENT DEVELOPMENTS AT CAMBRIDGE Stephen F. Gull and John Skilling	149
PRIOR KNOWLEDGE MUST BE USED John Skilling and Stephen F. Gull	161
HOW THE BRAIN WORKS: THE NEXT GREAT SCIENTIFIC REVOLUTION David Hestenes	173

MAXIMUM ENTROPY IN STRUCTURAL MOLECULAR BIOLOGY: THE FIBER DIFFRACTION PHASE PROBLEM Richard K. Bryan	207
A METHOD OF COMPUTING MAXIMUM ENTROPY PROBABILITY VALUES FOR EXPERT SYSTEMS Peter Cheeseman	229
SPECIAL-PURPOSE ALGORITHMS FOR LINEARLY CONSTRAINED ENTROPY MAXIMIZATION Yair Censor, Tommy Elfving, and Gabor T. Herman	241
BAYESIAN APPROACH TO LIMITED-ANGLE RECONSTRUCTION IN COMPUTED TOMOGRAPHY Kenneth M. Hanson and George W. Wecksung	255
APPLICATION OF THE MAXIMUM ENTROPY PRINCIPLE TO RETRIEVAL FROM LARGE DATA BASES Paul B. Kantor	273
TWO RECENT APPLICATIONS OF MAXIMUM ENTROPY Lee H. Schick	283
A VARIATIONAL METHOD FOR CLASSICAL FLUIDS Ramarao Inguva, C. Ray Smith, T. M. Huber, and Gary Erickson . . .	295
UPDATING INDUCTIVE INFERENCE N. C. Dalkey	305
PARALLEL ALGORITHMS FOR MAXIMUM ENTROPY CALCULATION Stuart Geman	317
Subject Index	319

