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Chapter 6 Multiobject Metrology6.1 INTRODUCTION; 6.2 MULTIOBJECT MISS DISTANCE; 6.3 MULTIOBJECT INFORMATION FUNCTIONALS; Part II RFS Filters: StandardMeasurement Model; Chapter 7 Introduction to Part II; 7.1 SUMMARY OF MAJOR LESSONS LEARNED; 7.2 STANDARD MULTITARGET MEASUREMENT MODEL; 7.3 AN APPROXIMATE STANDARD LIKELIHOOD FUNCTION; 7.4 STANDARD MULTITARGET MOTION MODEL; 7.5 STANDARD MOTION MODEL WITH TARGET SPAWNING; 7.6 ORGANIZATION OF PART II; Chapter 8 Classical PHD and CPHD Filters; 8.1 INTRODUCTION; 8.2 A GENERAL PHD FILTER; 8.3 ARBITRARY-CLUTTER PHD FILTER; 8.4 CLASSICAL PHD FILTER.
8.5 CLASSICAL CARDINALIZED PHD (CPHD) FILTER8.6 ZERO FALSE ALARMS (ZFA) CPHD FILTER; 8.7 PHD FILTER FOR STATE-DEPENDENT POISSON CLUTTER; Chapter 9 Implementing Classical PHD/CPHDFilters; 9.1 INTRODUCTION; 9.2 "SPOOKY ACTION AT A DISTANCE"; 9.3 MERGING AND SPLITTING FOR PHD FILTERS; 9.4 MERGING AND SPLITTING FOR CPHD FILTERS; 9.5 GAUSSIAN MIXTURE (GM) IMPLEMENTATION; 9.6 SEQUENTIAL MONTE CARLO (SMC) IMPLEMENTATION; Chapter 10 Multisensor PHD and CPHD Filters; 10.1 INTRODUCTION; 10.2 THE MULTISENSOR-MULTITARGET BAYES FILTER; 10.3 THE GENERAL MULTISENSOR PHD FILTER.
10.4 THE MULTISENSOR CLASSICAL PHD FILTER10.5 ITERATED-CORRECTOR MULTISENSOR PHD/CPHD FILTERS; 10.6 PARALLEL COMBINATION MULTISENSOR PHD AND CPHD FILTERS; 10.7 AN ERRONEOUS "AVERAGED" MULTISENSOR PHD FILTER; 10.8 PERFORMANCE COMPARISONS; Chapter 11 Jump-Markov PHD/CPHD Filters; 11.1 INTRODUCTION; 11.2 JUMP-MARKOV FILTERS: A REVIEW; 11.3 MULTITARGET JUMP-MARKOV SYSTEMS; 11.4 JUMP-MARKOV PHD FILTER; 11.5 JUMP-MARKOV CPHD FILTER; 11.6 VARIABLE STATE SPACE JUMP-MARKOV CPHD FILTERS; 11.7 IMPLEMENTING JUMP-MARKOV PHD/CPHD FILTERS; 11.8 IMPLEMENTED JUMP-MARKOV PHD/CPHD FILTERS.

Sommario/riassunto

This is the sequel to the 2007 Artech House bestselling title, Statistical Multisource-Multitarget Information Fusion. That earlier book was a comprehensive resource for an in-depth understanding of finite-set statistics (FISST), a unified, systematic, and Bayesian approach to information fusion. The cardinalized probability hypothesis density (CPHD) filter, which was first systematically described in the earlier book, has since become a standard multitarget detection and tracking technique, especially in research and development. Since 2007, FISST has inspired a considerable amount of research.