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Sommario/riassunto	Stochastic filtering theory is a field that has seen a rapid development in recent years and this book, aimed at graduates and researchers in applied mathematics, provides an accessible introduction covering recent developments. - ;Stochastic Filtering Theory uses probability tools to estimate unobservable stochastic processes that arise in many applied fields including communication, target-tracking, and mathematical finance. As a topic, Stochastic Filtering Theory has progressed rapidly in recent years. For example, the (branching) particle system representation of the optimal filter has bee