

1. Record Nr.	UNINA9910254301303321
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Titolo	Stable and efficient cubature-based filtering in dynamical systems // by Dominik Ballreich
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-62130-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XVII, 160 p. 19 illus., 14 illus. in color.)
Disciplina	515.624
Soggetti	Statistics Econometrics Computer science - Mathematics Vibration Dynamics Statistical physics Statistics for Business, Management, Economics, Finance, Insurance Computational Mathematics and Numerical Analysis Vibration, Dynamical Systems, Control Statistical Physics and Dynamical Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Filtering in Dynamical Systems -- Deterministic Numerical Integration -- Optimization and Stabilization of Cubature Rules -- Simulation Studies -- Results -- Appendices -- Index -- Bibliography.
Sommario/riassunto	The book addresses the problem of calculation of d-dimensional integrals (conditional expectations) in filter problems. It develops new methods of deterministic numerical integration, which can be used to speed up and stabilize filter algorithms. With the help of these methods, better estimates and predictions of latent variables are made possible in the fields of economics, engineering and physics. The resulting procedures are tested within four detailed simulation studies.