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D. Shi, L. Shi, T. Chen

Event-Based State Estimation

A Stochastic Perspective

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- ▶ Provides know-how that can improve process energy efficiency and reduce communications costs
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This book explores event-based estimation problems. It shows how several stochastic approaches are developed to maintain estimation performance when sensors perform their updates at slower rates only when needed.

The self-contained presentation makes this book suitable for readers with no more than a basic knowledge of probability analysis, matrix algebra and linear systems. The introduction and literature review provide information, while the main content deals with estimation problems from four distinct angles in a stochastic setting, using numerous illustrative examples and comparisons. The text elucidates both theoretical developments and their applications, and is rounded out by a review of open problems.

This book is a valuable resource for researchers and students who wish to expand their knowledge and work in the area of event-triggered systems. At the same time, engineers and practitioners in industrial process control will benefit from the event-triggering technique that reduces communication costs and improves energy efficiency in wireless automation applications.



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