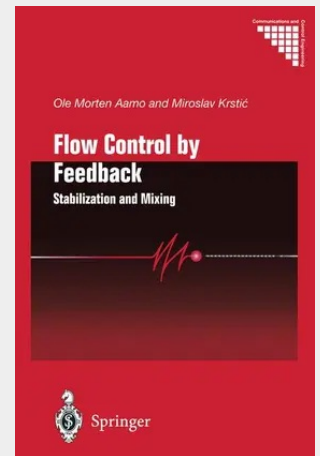


Flow Control by Feedback

In the 70+ year history of control theory and engineering, few applications have stirred as much excitement as flow control. The same can probably be said for the general area of fluid mechanics with its much longer history of several centuries. This excitement is understandable and justified. Turbulence in fluid flows has been recognized as the last great unsolved problem of classical 1 physics and has driven the careers of many leading mathematicians of the 20th century.² Likewise, control theorists have hardly ever come across a problem this challenging. The emergence of flow control as an attractive new field is owed to the break throughs in micro-electro-mechanical systems (MEMS) and other technologies for instrumenting fluid flows on extremely short length and time scales. The remaining missing ingredient for turning flow control into a practical tool is control algorithms with provable performance guarantees. This research mono graph is the first book dedicated to this problem-systematic feedback design for fluid flows.

In the 70+ year history of control theory and engineering, few applications have stirred as much excitement as flow control. The same can probably be said for the general area of fluid mechanics with its much longer history of several centuries. This excitement is understandable and justified. Turbulence in fluid flows has been recognized as the last great unsolved problem of classical 1 physics and has driven the careers of many leading mathematicians of the 20th century.² Likewise, control theorists have hardly ever come across a problem this challenging. The emergence of flow control as an attractive new field is owed to the break throughs in micro-electro-mechanical systems (MEMS) and other technologies for instrumenting fluid flows on extremely short length and time scales. The remaining missing ingredient for turning flow control into a practical tool is control algorithms with provable performance guarantees. This research mono graph is the first book dedicated to this problem-systematic feedback design for fluid flows.



149,98 €

140,17 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781849968928

Medium: Buch

ISBN: 978-1-84996-892-8

Verlag: Springer

Erscheinungstermin: 19.10.2010

Sprache(n): Englisch

Auflage: 1. Auflage. Softcover version of original hardcover Auflage 2003

Serie: Communications and Control Engineering

Produktform: Kartoniert

Gewicht: 335 g

Seiten: 198

Format (B x H): 155 x 235 mm

