



# Controllability of Partial Differential Equations Governed by Multiplicative Controls

By Alexander Y. Khapalov

Springer. Paperback. Condition: New. 284 pages. Dimensions: 9.1in. x 6.1in. x 0.9in. In a typical mathematical model of a controlled distributed parameter process one usually finds either boundary or internal locally distributed controls to serve as the means to describe the effect of external actuators on the process at hand. However, these classical controls, entering the model equations as additive terms, are not suitable to deal with a vast array of processes that can change their principal intrinsic properties due to the control actions. Important examples here include (but not limited to) the chain reaction-type processes in biomedical, nuclear, chemical and financial applications, which can change their (reaction) rate when certain catalysts are applied, and the so-called smart materials, which can, for instance, alter their frequency response. The goal of this monograph is to address the issue of global controllability of partial differential equations in the context of multiplicative (or bilinear) controls, which enter the model equations as coefficients. The mathematical models of our interest include the linear and nonlinear parabolic and hyperbolic PDEs, the Schrödinger equation, and coupled hybrid nonlinear distributed parameter systems associated with the swimming phenomenon. Pullman, WA, USA Alexander Khapalov January 2010 vii Preface This monograph developed from the research conducted in 2001-2009 in the area...



**READ ONLINE**  
[ 4.81 MB ]

## Reviews

*It is an awesome publication which I actually have ever read through. It had been written really properly and valuable. I found out this book from my friend and dad recommended this PDF to discover.*

-- **Doyle Schmeler**

*This book is definitely not simple to begin on studying but quite fun to see. I actually have read and that I am sure that I will go back to read it again in the foreseeable future. It is extremely difficult to leave it before concluding, once you begin to read the book.*

-- **Brennan Koelpin**

## Related eBooks



### **Dont Line Their Pockets With Gold Line Your Own A Small How To Book on Living Large**

Madelyn D R Books. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.This book is about my cousin, Billy a guy who taught me a lot over the years and who can teach you a lot. Everyone who...



### **Too Old for Motor Racing: A Short Story in Case I Didnt Live Long Enough to Finish Writing a Longer One**

Balboa Press. Paperback. Book Condition: New. Paperback. 106 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.We all have dreams of what we want to do and who we want to become. Many of us eventually decide it is too late; we have missed...



### **The Day I Forgot to Pray**

Tate Publishing. Paperback. Book Condition: New. Paperback. 28 pages. Dimensions: 8.7in. x 5.8in. x 0.3in.Alexis is an ordinary five-year-old who likes to run and play in the sandbox. On her first day of Kindergarten, she makes her first school-aged friend, Elizabeth, and...



### **Summer Fit Preschool to Kindergarten Math, Reading, Writing, Language Arts Fitness, Nutrition and Values**

Summer Fit Learning. Paperback. Book Condition: New. Paperback. 160 pages. Dimensions: 10.6in. x 8.3in. x 0.5in.Summer Fit Activity Books move summer learning beyond academics to also prepare children physically and socially for the grade ahead. Academic exercises are based on Common Core...



### **DK Readers Animal Hospital Level 2 Beginning to Read Alone**

DK CHILDREN. Paperback. Book Condition: New. Paperback. 32 pages. Dimensions: 8.9in. x 5.8in. x 0.1in.This Level 2 book is appropriate for children who are beginning to read alone. When Jack and Luke take an injured duck to the vet, it is just...



### **DK Readers Day at Greenhill Farm Level 1 Beginning to Read**

DK CHILDREN. Paperback. Book Condition: New. Paperback. 32 pages. Dimensions: 8.8in. x 5.7in. x 0.2in.This Level 1 book is appropriate for children who are just beginning to read. When the rooster crows, Greenhill Farm springs to life. Join the ducklings, cows, and...