Designing Robot Behavior in Human-Robot Interactions

Changliu Liu, Robotics Institute, Carnegie Mellon University, **Te Tang**, Department of Mechanical Engineering, University of California, Berkeley, **Hsien-Chung Lin,** Ph.D. Candidate, Department of Mechanical Engineering, University of California, Berkeley and **Masayoshi Tomizuka**, University of California, Berkeley

Human-robot interactions have been recognized to be a key element of future robots in many application domains such as manufacturing and transportation. It is challenging to design the behavior of those robots as they need to operate in highly unstructured and stochastic environments. The focus of this book is to set up a unified analytical framework for various human-robot systems; to establish a methodology to design the robot behaviors through control, decision and learning so that they can interact safely and efficiently with humans in dynamic uncertain environments; and to demonstrate the effectiveness of the method through a variety of realistic applications.

September 2019: 6-1/8 x 9-1/4: 236pp
113 illustrations

Hb: 978-0-367-17969-4 | $189.95
eBook: 978-0-429-05871-4

For more information visit:
www.crcpress.com/9780367179694