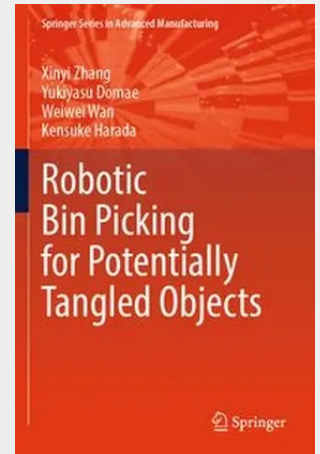


Robotic Bin Picking for Potentially Tangled Objects

This book introduces methods for bin picking in manufacturing. These methods can be used to develop unified, dexterous, and robust bin picking systems for entangled objects. The target objects include both rigid and deformable objects. Robotic bin picking is a valuable task in manufacturing, aiming to automate the assembly process by utilizing robots to pick necessary objects from disorganized bins. Previous studies have addressed various challenges related to bin picking. However, when objects with complex shapes or deformable properties are randomly placed in a bin, they tend to get entangled, making it difficult for the robot to pick up individual items. This poses challenges in perception, as the robot must be capable of distinguishing between isolated objects and potentially tangled ones in a cluttered environment. This book is of interest to students, researchers, and professionals in manufacturing industries.

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181,89 €

169,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783031674563

Medium: Buch

ISBN: 978-3-031-67456-3

Verlag: Springer

Erscheinungstermin: 18.10.2025

Sprache(n): Englisch

Auflage: Erscheinungsjahr 2025

Serie: Springer Series in Advanced Manufacturing

Produktform: Kartoniert

Seiten: 129

Format (B x H): 155 x 235 mm

