

Preface

This book is an attempt to address the wide topic of grasping in robotics with a multi-disciplinary approach. Each chapter has been authored by an expert or a team of experts in a specific area spanning from the mechanics of machinery to control theory, informatics, and mechatronics. Chapters have been divided into four sections with the aim to give a theoretical and historical background, to discuss main concepts for mechanical design, to illustrate main issues on control and motion planning for both industrial and non-conventional applications. Applications have been detailed by referring to industrial gripping solutions as proposed with experiences at the company Schunk GmbH, for grasping solutions in agriculture, micro-gripping solutions in precision assembly processes, and innovative design solutions such as in fusing grasping features into robot design.

This book project can be foreseen as a reference for young professionals/researchers to overview the most significant aspects in the field of grasping in robotics. Given the wideness of the topic, this book can be considered as a first edition and, as Editor, I shall be pleased to consider additional contents/suggestions for a future edition.

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