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| Nota di contenuto | 1 Tamim Asfour, Samuel Rader, Pascal Weiner, Felix Hundhausen, Julia Starke, Cornelius Klas, Stefan Reither, Christian R. G. Dreher, Fabian Reister, Miha Dezman and Charlotte Marquardt, Robotronics – Robot Mechatronics -- 2 Anthony A. Maciejewski and Biyun Xie, Redundant Robots -- 3 Andreas Müller, Parallel Robots -- 4 Joern Malzahn, Freia Muster and Torsen Bertram, Elastic Robots -- 5 Cecilia Laschi, Soft Robots -- 6 Mark R. Cutkosky, Bioinspired Robot Design -- 7 Marilena Vendittelli, Wheeled Robots -- 8 Kensuke Harada, Humanoids. |
| Sommario/riassunto | A robot's appearance and its way of interacting with humans is of fundamental importance. Until a few years ago there was a clear asymmetry between the typically excellent performance of industrial |

robots and their ugly and disharmonious bodies, with crude ways and potentially very dangerous movements for the human environment. A modern artifact can be as harmonious and beautiful as a complex biological machine or a work of plastic art and thus it should be clear how design plays a key role for robot technology to become a part of our everyday life and change it essentially in a responsible and beneficial manner. It is designers who shape the interface between humans and machines and, as such, they will contribute to make robots as customizable and intuitively useful to inexperienced users according to a plug-and-play mode. The new concept of robotronics as the mechatronics approach to designing advanced robots is the focus of the first chapter of the second book of the Robotics Goes MOOC project by Asfour et al. The main issues for robot manipulator design are covered in the subsequent material, namely redundant robots in Chapter 2 by Maciejewsky et al and parallel robots in Chapter 3 by Müller, where widely adopted kinematic solutions are presented. Then, the adoption to flexibility, as opposed to the rigid mechanics paradigm, is discussed in Chapter 4 by Bertram et al with reference to elastic robots and in Chapter 5 by Laschi focused on soft robotics. Somewhat speculating on the previous two design solutions comes Chapter 6 by Cutkosky dealing with bioinspired robots. The last part of the book is devoted to robot locomotion, namely, Chapter 7 by Vendittelli on wheeled robots and Chapter 8 by Harada on (biped) humanoids. The image on the cover metaphorically illustrates the design paradigm of robotics through a hand firmly grasping an apple. The content published here are linked to a series of MOOCs on Robotics specifically created and hosted by Federica Web Learning. You can access the related content via our app: download the SN More Media app for free, scan the link and access directly to the online courses on your smartphone or tablet.
