

Contents

Part I Perceptual Softness

1	Physical Aspects of Softness Perception	3
	Wouter M. Bergmann Tiest and Astrid M.L. Kappers	
2	Visual-Haptic Compliance Perception	17
	Roberta L. Klatzky and Bing Wu	
3	Vibrotactile Sensation and Softness Perception	31
	Yon Visell and Shogo Okamoto	
4	Perception and Synthesis of Sound-Generating Materials	49
	Bruno L. Giordano and Federico Avanzini	
5	Computational Aspects of Softness Perception	85
	Massimiliano Di Luca and Marc O. Ernst	

Part II Sensorimotor Softness

6	Exploratory Movement Strategies in Softness Perception	109
	Knut Drewing	
7	The Perception of the Centre of Elastic Force Fields: A Model of Integration of the Force and Position Signals	127
	Gabriel Baud-Bovy	
8	Dynamic Combination of Movement and Force for Softness Discrimination	147
	Markus Rank and Sandra Hirche	
9	Perception of Stiffness with Force Feedback Delay	167
	Ilana Nisky, Raz Leib, Amit Milstein and Amir Karniel	

Part III Artificial Softness

10 Compliance Perception Using Natural and Artificial Motion Cues 189
Netta Gurari and Allison M. Okamura

11 A Fabric-Based Approach for Softness Rendering 219
Matteo Bianchi, Alessandro Serio, Enzo Pasquale Scilingo
and Antonio Bicchi

12 Haptic Augmentation in Soft Tissue Interaction. 241
Seokhee Jeon, Seungmoon Choi and Matthias Harders



<http://www.springer.com/978-1-4471-6532-3>

Multisensory Softness
Perceived Compliance from Multiple Sources of
Information

Di Luca, M. (Ed.)

2014, XIII, 257 p. 80 illus., Hardcover

ISBN: 978-1-4471-6532-3