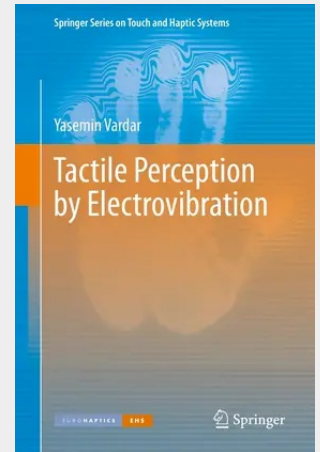


Tactile Perception by Electro vibration

This book explains the mechanisms underpinning the tactile perception of electro vibration and lays the groundwork for delivering realistic haptic feedback on touchscreens via this method. Effective utilization of electro vibration can only be accomplished by simultaneously investigating both the physical and perceptual aspects of the finger-touchscreen interaction. Towards this goal, present work blends the available knowledge on electromechanical properties of the human finger and human tactile perception with the results of new psychophysical experiments and physical measurements. By following such an approach that combines both theoretical and experimental information, the study proposes new methods and insights on generating realistic haptic effects, such as textures and edges on these displays. Besides, state-of-the-art research on the field is reviewed, and future work is discussed. The presented interdisciplinary methods and insights can interest students, broad communities of haptics, neuroscience, engineering, physics, and cognitive sciences, as well as user-interaction experts and product designers from the industry.

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