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Titolo	Haptic Interaction : Perception, Devices and Applications // edited by Hiroyuki Kajimoto, Hideyuki Ando, Ki-Uk Kyung
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Descrizione fisica	1 online resource (292 p.)
Collana	Lecture Notes in Electrical Engineering, , 1876-1100 ; ; 277
Disciplina	006.8
Soggetti	Robotics Automation Biomedical engineering User interfaces (Computer systems) Computational intelligence Robotics and Automation Biomedical Engineering and Bioengineering User Interfaces and Human Computer Interaction Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	The Scaling of the Haptic Perception on the Fingertip using an Interface of Anthropomorphic Finger Motions -- Change in the amount poured as a result of vibration when pouring a liquid -- A Study on Upper-Limb Motor Control Using Mirror Illusion in Bimanual Steering -- Vibrotactile Cueing for Biasing Perceived Inertia of Gripped Object -- Auditory Feedback for Earpicks -- Visual Stimulation Influences on the Position of Vibrotactile Perception -- Haptic Assistance of Spatial Pointing with Simple Vibrotactile Feedback for Gesture Interfaces -- Pressure sensation elicited by rapid temperature changes -- The Effect of Frequency Shifting on Audio-Tactile Conversion for Enriching Musical Experience -- A flexible PDMS-based multimodal pulse and temperature display -- Adding Texture to Aerial Images Using Ultrasounds -- Driving System of Diminished Haptics: Transformation of Real World Textures -- High-Speed Thermal Display System which

Synchronized with the Image Using Water Flow -- Texture Modulation of 3D Fabricated Object via Electrotactile Augmentation -- Rendering Different Sensations to Multiple Fingers in a Multi-Digit Softness Display: Pulsation and Distributed Softness -- Development of Wearable Outer-Covering Haptic Display using Ball-Effector for Hand Motion Guidance -- Presentation of Softness Using Film-Type Electro-Tactile Display and Pressure Distribution Measurement -- Development of Cold Sense Display Using Adjustment of Water Flow Volume -- HeatHapt:Thermal-Radiation-Based Haptic Display -- Haptic Interaction on a Touch Surface -- Preliminary demonstration of friction perception generated by Laterally symmetric vibrotactile stimuli -- Pressure Threshold of the Hanger Reflex at the Wrist -- SPIDAR-S: Haptic Device Attached to the Smartphone -- Pseudo--Haptic Interface Using Multipoint Suction Pressures and Vibrotactile Stimuli -- Wearable pseudo-haptic interaction by using electrical muscle stimulation -- Normal and Tangential Force Decomposition and Augmentation Based on Contact Centroid -- Object Manipulation by Deformable Hand -- A Proposal of wire driven bimanual multi-finger haptic display -- Force control of Stuffed Toy Robot for Intention Expression -- Wearable 3DOF substitutive force display device based on frictional vibrotactile phantom sensation -- Proposal of 6 DoF Haptic Interface SPIDAR-I Optimized by Minimizing Margin of Peak Force -- Robotic Touch Surface: 3D Haptic Rendering of Virtual Geometry on Touch Surface -- SRU: Stepwise Rotation Update of Finite Element Model for Large Deformation -- A Conceptual Design of a Smart Knob with Torque Feedback for Mobile Applications -- Built-in Capacitive Position Sensing for Multi-user Electrostatic Visuo-haptic Display -- Highly Flexible and Transparent Skin-like Tactile Sensor -- A Mounting Foot Type Force Sensing Device for a Desk with Haptic Sensing Capability -- Thumbnail Input for Head-Mounted Display -- Fingertip force estimation based on the deformation of the fingertip -- Exoskeleton Simulator of Impaired Ankle: Simulation of Spasticity and Clonus -- A Surgery Simulator Using an Optimized Space and Time Adaptive Deformation Simulation on GPU -- Hierarchical Examination of Colliding Points Between Rigid and Deformable Objects -- Wearable robot for simulating knee disorders in the training of manual examination techniques -- Development of the haptic device for a hepatectomy surgery simulator -- Haptic Augmentation of Surgical Operation using a Passive Hand Exoskeleton -- Haptic Virtual Reality Training Environment for Microrobotic Cell Injection -- FeelCraft: User-Crafted Tactile Content -- Development of Ball Game Defense Robot Based on Physical Properties and Motion of Human -- Development of Handshake Gadget and Exhibition in Niconico Chokaigi -- Haptic Snake: Line-based Physical Mobile Interaction in 3D Space -- Panoramic Movie-rendering Method with Superimposed Computer Graphics for Immersive Walk-through System -- Air tap : the sense of tapping a rigid in the midair -- Haptic-Enabled English Education System -- Visual Vibrations to Simulate Taps on Different Materials -- Haptic Interface for Shape and Texture Recognition of Remote Objects by Using a Laser Range Finder -- Generating Vibrotactile Images on the Human Palms -- A Proposal of Model-based Haptization System for Animal Images.

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## Sommario/riassunto

This book is aimed not only at haptics and human interface researchers, but also at developers and designers from manufacturing corporations and the entertainment industry who are working to change our lives. This publication comprises the proceedings of the first International AsiaHaptics conference, held in Tsukuba, Japan, in 2014. The book describes the state of the art of the diverse haptics-

(touch-) related research, including scientific research into haptics perception and illusion, development of haptics devices, and applications for a wide variety of fields such as education, medicine, telecommunication, navigation, and entertainment.

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