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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Teleoperator Controls -- Haptic feedback: a brief history from telepresence to virtual reality -- Haptic Interfaces for Blind People -- Design principles for tactile interaction -- The haptic perception of texture in virtual environments: an investigation with two devices -- Haptic display of mathematical functions for teaching mathematics to students with vision disabilities: design and proof of concept -- Haptic graphs for blind computer users -- Web-based touch display for accessible science education -- Collaborative Haptics -- Communicating with feeling -- Improved precision in mediated collaborative manipulation of objects by haptic force feedback -- Hand-shaped force interface for human-cooperative mobile robot --

Psychological Issues and Measurement -- Can the efficiency of a haptic display be increased by short-time practice in exploration? -- Implicit accuracy constraints in two-fingered grasps of virtual objects with haptic feedback -- Interaction of visual and haptic information in simulated environments: texture perception -- The effective combination of haptic and auditory textural information -- Cursor trajectory analysis -- What impact does the haptic-stereo integration have on depth perception in stereographic virtual environment? a preliminary study -- A shape recognition benchmark for evaluating usability of a haptic environment -- Applications of Haptics -- A horse ovary palpation simulator for veterinary training -- Tactile navigation display -- Tactile information presentation in the cockpit -- Scaleable SPIDAR: a haptic interface for human-scale virtual environments -- The sense of object-presence with projection-augmented models -- Virtual space computer games with a floor sensor control — human centred approach in the design process -- Sensing the fabric: to simulate sensation through sensory evaluation and in response to standard acceptable properties of specific materials when viewed as a digital image.

Sommario/riassunto

Haptic human-computer interaction is interaction between a human computer user and the computer user interface based on the powerful human sense of touch. Haptic hardware has been discussed and exploited for some time, particularly in the context of computer games. However, so far, little attention has been paid to the general principles of haptic HCI and the systematic use of haptic devices for improving efficiency, effectiveness, and satisfaction in HCI. This book is the first one to focus on haptic human-computer interaction. It is based on a workshop held in Glasgow, UK, in August / September 2000. The 22 revised full papers presented were carefully reviewed and selected from 35 submissions. Besides a brief historic survey, the book offers topical sections on haptic interfaces for blind people, collaborative haptics, psychological issues and measurement, and applications of haptics.