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| Autore | Zeng Limin |
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| Altri autori (Persone) | WeberGerhard |
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| Soggetti | User interfaces (Computer systems)<br>Human-computer interaction<br>Service industries<br>Human-machine systems<br>Application software<br>Engineering mathematics<br>Engineering - Data processing<br>User Interfaces and Human Computer Interaction<br>Services<br>Interaction Design<br>Computer and Information Systems Applications<br>Mathematical and Computational Engineering Applications |
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| Nota di contenuto | Designing User interfaces for the Feeling -- The Overview of Haptic Displays -- User Interfaces for Pin-Array Tactile Displays -- Reading Text, Math and Charts on Pin-array Displays -- Reading and Drawing Graphics -- Exploring Outdoor & Indoor Tactile Maps. |
| Sommario/riassunto | This book provides a comprehensive and professional overview of the latest scientific and practical advancements in pin-arrayed tactile displays, with a focus on multimodal user interface design, implementation, and impactful applications. It presents a series of research achievements by the authors' group over the past decade. |

Dynamic pin-arrayed tactile displays are recognized as the next generation of accessible displays, capable of presenting not only text but also graphic information such as geometry, figures, maps, charts, and drawings. This book offers a state-of-the-art review of haptic displays and discusses the key challenges of pin-arrayed tactile displays, addressing hardware, software, and user requirements. It also explores fundamental user interface design approaches, including window-based GUI design, multitouch gestures, widget and texture design, and audio-haptic integration. Several standout applications, such as tactile charts, tactile graphics, and tactile maps, are introduced in detail. The authors' research experience, along with in-house developed software toolkits, will enable researchers and industry developers to quickly and easily create their own applications for these tactile displays. As such, the book serves as a valuable resource for researchers in Human-Computer Interaction, UI Design, and related fields, as well as for students at the undergraduate, master's, and doctoral levels. It will also be of interest to software developers in the accessibility industry.