DESCRIPTION

How we interface and interact with computing, communications and entertainment devices is going through revolutionary changes, with natural user inputs based on touch, voice, and vision replacing or augmenting the use of traditional interfaces based on the keyboard, mouse, joysticks, etc. As a result, displays are morphing from one-way interface devices that merely show visual content to two-way interaction devices that provide more engaging and immersive experiences. This book provides an in-depth coverage of the technologies, applications, and trends in the rapidly emerging field of interactive displays enabled by natural human-interfaces.

Key features:

• Provides a definitive reference reading on all the touch technologies used in interactive displays, including their advantages, limitations, and future trends.

• Covers the fundamentals and applications of speech input, processing and recognition techniques enabling voice-based interactions.

• Offers a detailed review of the emerging vision-based sensing technologies, and user interactions using gestures of hands, body, face, and eye gazes.

• Discusses multi-modal natural user interface schemes which intuitively combine touch, voice, and vision for life-like interactions.

• Examines the requirements and technology status towards realizing “true” 3D immersive and interactive displays.
ABOUT THE AUTHOR

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Dr. Achin Bhowmik is the director of perceptual computing technology and solutions at Intel Corporation, where his group is focused on developing next-generation computing solutions based on natural human-computer interaction and visual computing technologies and applications. He is a senior member of the IEEE as well as program committee member of SID and IMID. He is associate editor of the Journal of the Society for Information Display, and was guest editor for two special volumes on "Advances in OLED Displays" and "Interactive Displays". Dr. Bhowmik is an Adjunct Professor at Kyung-Hee University, Seoul, Korea teaching courses on digital imaging & display, digital image processing and optics of liquid crystal displays. He is on the board of directors for OpenCV, the organization behind the open source computer vision library.

SERIES

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