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Sommario/riassunto	How does the brain orchestrate perceptions, thoughts, and actions from the activity of its neurons? Addressing these challenging issues requires methods with sufficiently high temporal and spatial resolution of neuronal activity in both local and global networks as well as theories to advance understanding how different levels of brain dynamics interact. This book brings together leading investigators who represent various aspects of brain dynamics with the goal of presenting state-of-the-art current progress and address future developments.

The topics cover the most fascinating facets of neuroscience from elementary computation of neurons, mesoscopic network oscillations, internally generated assembly sequences in the service of cognition, large-scale neuronal interactions within and across systems, the impact of sleep on cognition, memory and mental illness, brain controlled robots, motor-sensory integration, spatial navigation, large-scale computation and consciousness. Overall, this volume offers an integrated view of the challenges and opportunities in deciphering brain circuits in health and disease. 2FI0208.