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Nota di contenuto	1. Introduction -- 2. fMRI: Blood Oxygen Level Dependent Contrast and Its Value for Understanding Functioning Brain Networks -- 3. Review of Resting-State Functional Connectivity Methods and Application in Clinical Populations -- 4. Directed Interregional Brain Interactions -- 5. Meta-analytic connectivity modelling (MACM): A tool for assessing regionspecific functional connectivity patterns in task-constrained states -- 6. dMRI: Diffusion Magnetic Resonance Imaging as a Window onto Structural Brain Networks and White Matter Microstructure -- 7. Data Mining in the Era of Big Data: The BrainMap Database as a Resource for Characterizing Psychiatric Illness -- 8. Network modulation in neuropsychiatric disorders using The Virtual Brain -- 9. Networks-mediated spreading of pathology in neurodegenerative diseases -- 10. Resting-State Functional Network Disturbances in Schizophrenia -- 11. Disturbed Brain Networks in the Psychosis High-Risk State? -- 12. Functional Connectivity in Autism Spectrum Disorders: Challenges and Perspectives -- 13. Functional Resting-State Network Disturbances in Bipolar Disorder -- 14. An overview of resting state functional connectivity studies of major depressive disorder --

15. Brain network dysfunction in bipolar disorder: evidence from structural and functional MRI studies -- 16. Understanding the Network Bases of ADHD: An Overview of the fMRI Evidence -- 17. Cortical-Limbic and Default Mode Networks in Borderline Personality Disorder -- 18. Structural and Functional Connectivity Changes Following Cognitive Remediation: A systematic review -- 19. Single-Subject Prediction: A Statistical Paradigm for Precision Psychiatry -- 20. Genetic Imaging: Promises and Pitfalls -- 21. Brain networks and the emergence of the Self: A neurophenomenal perspective -- 22. Research Domains and Brain Network Dysfunction: Toward a New Taxonomy of Neuropsychiatric Illness.

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#### Sommario/riassunto

Brain network function and dysfunction is the dominant model for understanding how the brain gives rise to normal and abnormal behavior. Moreover, neuropsychiatric illnesses continue to resist attempts to reveal an understanding of their bases. Thus, this timely volume provides a synthesis of the uses of multiple analytic methods as they are applied to neuroimaging data, to seek understanding of the neurobiological bases of psychiatric illnesses, understanding that can subsequently aid in their management and treatment. A principle focus is on the analyses and application of methods to functional magnetic resonance imaging (fMRI) data. fMRI remains the most widely used neuroimaging technique for estimating brain network function, and several of the methods covered can estimate brain network dysfunction in resting and task-active states. Additional chapters provide details on how these methods are (and can be) applied in the understanding of several neuropsychiatric disorders, including schizophrenia, mood disorders, autism, borderline personality disorder, and attention deficit hyperactivity disorder (ADHD). A final complement of chapters provides a collective overview of how this framework continues to provoke theoretical advances in our conception of the brain in psychiatry. This unique volume is designed to be a comprehensive resource for imaging researchers interested in psychiatry, and for psychiatrists interested in advanced imaging applications.

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