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	Sommario/riassunto	This volume gathers papers presented at the Workshop on Computational Diffusion MRI (CDMRI 2019), held under the auspices of the International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), which took place in Shenzhen, China on October 17, 2019. This book presents the latest advances in the rapidly expanding field of diffusion MRI. It shares new perspectives on the latest research challenges for those currently working in the field, but also offers a valuable starting point for anyone interested in learning about computational techniques in diffusion MRI. The book includes rigorous mathematical derivations, a wealth of rich, full-colour visualisations and extensive clinically relevant results. As such, it will be of interest to researchers and practitioners in the fields of computer science, MRI physics and applied mathematics. Readers will find contributions covering a broad range of topics, from the mathematical foundations of the diffusion process and signal generation, to new computational methods and estimation techniques for the in vivo recovery of microstructural and connectivity features, as well as diffusion-relaxometry and frontline applications in research and clinical practice. This edition includes invited works from high-profile researchers with a specific focus on three new and important topics that are gaining momentum within the diffusion MRI community,

including diffusion MRI signal acquisition and processing strategies, machine learning for diffusion MRI, and diffusion MRI outside the brain and clinical applications.