



Special Issue Reprint

Transport and Diffusion in Quantum Complex Systems

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This Special Issue presents contributions from leading experts working in different branches of quantum physics. The relevance of quantum transport and diffusion processes at both a fundamental and technological level is well highlighted by the variety of applications discussed. Fundamental problems, such as the description of the evolution of open quantum systems, can be explored in terms of excitation transport in suitable structures, whereas the motion of particles on a graph can provide information on the graph itself, thus becoming a metrological resource. Quantum information transfer and routing protocols are instead representative of the class of quantum transport problems that have direct application to quantum technologies. The contributions to this book offer therefore a variety of different perspectives on quantum transport and diffusion processes, and allow to fully appreciate the centrality of the topic in the realm of quantum physics and fast developing quantum technologies.



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