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Sommario/riassunto	This book contains some of the results presented at the mini-symposium titled Emerging Problems in the Homogenization of Partial Differential Equations, held during the ICIAM2019 conference in Valencia in July 2019. The papers cover a large range of topics, problems with weak regularity data involving renormalized solutions, eigenvalue problems for complicated shapes of the domain, homogenization of partial differential problems with strongly alternating boundary conditions of Robin type with large parameters, multiscale analysis of the potential action along a neuron with a myelinated axon, and multi-scale model of magnetorheological suspensions. The volume is addressed to scientists who deal with complex systems that presents several elements (characteristics, constituents...) of very different scales, very heterogeneous, and search for homogenized models providing an effective (macroscopic) description of their behaviors. .