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	2.2.2. Change of scale in heterogeneous media -- 2.2.3. Principle of calculation of apparent properties -- 2.2.4. Homogenization of random media by numerical simulations
Sommario/riassunto	This book, coordinated by Marc Bernacki and Samuel Forest, delves into digital materials science, focusing on numerical methods at the mesoscopic scale. It explores various topics including mechanics, dislocation dynamics simulations, statistical approaches to random composites, and analytical methods for composites and polycrystals. The authors aim to advance understanding in the field of materials mechanics by discussing discrete dislocation dynamics, mesoscale plasticity, and statistical definitions of representative volume elements. The book is intended for researchers and practitioners in the field of materials science and engineering, providing insights into the mathematical and computational modeling of material behavior.