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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Experimental and Numerical Methods -- 2D Periodic Cellular Metals -- 3D Periodic Cellular Metals I. Textile -- 3D Periodic Cellular Metals II. Lattice Frame Materials (LMFs) -- Overall Evaluation of Thermo-Fluid Performance -- Theoretical Analysis -- Future. .

Sommario/riassunto

Thermo-Fluid Behaviour of Periodic Cellular Metals introduces the study of coupled thermo-fluid behaviour of cellular metals with periodic structure in response to thermal loads, which is an interdisciplinary research area that requires a concurrent-engineering approach. The book, for the first time, systematically adopts experimental, numerical, and analytical approaches, presents the fluid flow and heat transfer in periodic cellular metals under forced convection conditions, aiming to establish structure-property relationships for tailoring material structures to achieve properties and performance levels that are customized for defined multifunctional applications. The book, as a textbook and reference book, is intended for both academic and industrial people, including graduate students, researchers and engineers. Dr. Tian Jian Lu is a professor at the School of Aerospace, Xi'an Jiaotong University, Xi'an, China. Dr. Feng Xu is a professor at the Key Laboratory of Biomedical Information Engineering of Ministry of Education, School of Life Science and Technology, Xi'an Jiaotong University. Dr. Ting Wen is an engineer at Shell Oil Company. Dr. Lu and Dr. Xu are also affiliated with Biomedical Engineering and Biomechanics Center, Xi'an Jiaotong University.