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Nota di contenuto	1 State-of-the-art applications for the development of new materials and technologies -- 2 computer-based engineering tools which are widely used and related to the simulation, evaluation of data and design processes -- 3 Modern joining technologies can be used to fabricate new compound.
Sommario/riassunto	This volume contains many state-of-the-art applications for the development of new materials and technologies. It discusses computer-based engineering tools which are widely used and related to the simulation, evaluation of data and design processes. For example, modern joining technologies can be used to fabricate new compound or composite materials, even composed of dissimilar materials. Such materials are many times exposed to harsh environments and must reveal specific properties. Technologies in this context are mainly related to the transportation technologies in their wider sense. This means automotive and marine technology, i.e., ships, amphibious vehicles, docks, offshore structures, and even robots. Typically, finite

element and finite volume methods are used in the context of engineering simulations and this volume highlights their importance.