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Sommario/riassunto

This volume illuminates exciting new developments and approaches of classical mechanical problems. The ongoing necessity for research in this field stems from the need for new engineering solutions that save our resources and supplies sustainability standards as well as further considerations such as recyclability and environmental compatibility. These demands stimulate the special design of materials, e.g. composites. The interaction between materials and structures is related to different length scales and the combination of micro-, meso- or macroscale approaches results in new application possibilities. In addition, materials and structures are increasingly being analyzed under the influence of various physical fields.