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Sommario/riassunto	From science to engineering and from theory to practice, it illustrates different breakthroughs, traced back to their origin and placed into prospective. First, the text presents the fundamental laws of mechanics, the theory of elasticity, and the development of the generalized stress-generalized strain concept. Next, it details the era of plasticity. The finite element method comes as an offspring of the generalized stress generalized strain concept. Finally, the authors explore the era of computer simulation to offer a glimpse into the future--