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Sommario/riassunto	This monograph covers new variational and projection methods to study the dynamics within solid structures. To cope with the underlying initial-boundary value problems, the method of integrodifferential relations is employed. Applications and examples in physics, mechanics and control engineering range from natural vibrations or forced motions of elastic and viscoelastic bodies to heat and mass transfer processes. ContentsGeneralized formulations of parabolic and hyperbolic problemsVariational principles in linear elasticityVariational statements in structural mechanicsRitz method for initial-boundary value problemsVariational and projection techniques with semi-

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