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Sommario/riassunto	This book presents an analysis of eight non-classical problems of fracture and failure mechanics mainly obtained by research in the department of dynamics and stability of continuum of the S. P. Timoshenko Institute of Mechanics of the National Academy of Sciences of Ukraine (NAS of Ukraine). It focusses on the application of the 3D (three-dimensional) theories of stability, dynamics, and statics of solid mechanics to the investigation of non-classical problems of fracture and failure mechanics. .