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Sommario/riassunto	Fracture mechanics deals with the cracking behavior of materials, and cracking defines the limit state for many components of engineering systems. Fracture mechanics principles can help us design more robust components to ensure safer airplanes, space shuttles, ships, cranes, buildings, bridges, and mechanical systems. Written by researchers and experts of the field, this book examines recent progress in fracture mechanics applications. Chapters cover such topics as rupture theory, the J-integral, knitted fabric-reinforced polymer composites, and artificial neural networks to detect structural damage, among others. This volume is designed for graduate students, researchers, and practicing engineers.