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	Sommario/riassunto	This monograph has the ambitious aim of developing a mathematical theory of complex biological systems with special attention to the phenomena of ageing, degeneration and repair of biological tissues under individual self-repair actions that may have good potential in medical therapy.The approach to mathematically modeling biological systems needs to tackle the additional difficulties generated by the peculiarities of living matter. These include the lack of invariance principles, abilities to express strategies for individual fitness, heterogeneous behaviors, competition up to proliferative a