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Nota di contenuto	Self-focusing in the Past -- Self-Focusing and Filaments of Light: Past and Present -- Notes on Early Self-Focusing Papers -- Optical Self-Focusing: Stationary Beams and Femtosecond Pulses -- Self-Focusing of Optical Beams -- Multi-Focus Structure and Moving Nonlinear Foci: Adequate Models of Self-Focusing of Laser Beams in Nonlinear Media -- Small-Scale Self-focusing -- Wave Collapse in Nonlinear Optics -- Beam Shaping and Suppression of Self-focusing in High-Peak-Power Nd:Glass Laser Systems -- Self-focusing, Conical Emission, and Other Self-action Effects in Atomic Vapors -- Periodic Filamentation and Supercontinuum Interference -- Reprints of Papers from the Past -- Self-focusing in the Past -- Self-focusing and Filamentation of Femtosecond Pulses in Air and Condensed Matter: Simulations and Experiments -- Self-organized Propagation of Femtosecond Laser Filamentation in Air -- The Physics of Intense Femtosecond Laser Filamentation -- Self-focusing and Filamentation of Powerful Femtosecond Laser Pulses -- Spatial and Temporal Dynamics of Collapsing Ultrashort Laser Pulses -- Some Modern Aspects of Self-

	focusing Theory -- X-Waves in Self-Focusing of Ultra-Short Pulses -- On the Role of Conical Waves in Self-focusing and Filamentation of Femtosecond Pulses with Nonlinear Losses -- Self-focusing and Self-defocusing of Femtosecond Pulses with Cascaded Quadratic Nonlinearities -- Effective Parameters of High-Power Laser Femtosecond Radiation at Self-focusing in Gas and Aerosol Media -- Diffraction-Induced High-Order Modes of the (2 + 1)D Nonparaxial Nonlinear Schrödinger Equation -- Self-Focusing and Solitons in Photorefractive Media -- Measuring Nonlinear Refraction and Its Dispersion.
Sommario/riassunto	Self-focusing: Past and Present presents a comprehensive treatment of self-focusing and reviews both theoretical and experimental investigations of self-focusing. It connects the extensive early literature on self-focusing, filamentation, self-trapping, and collapse with more recent studies aimed at issues such as self-focusing of femtosecond pulses, white light generation, and the generation of filaments in air with lengths of more than 10 km. It also describes some modern advances in self-focusing theory including the influence of beam nonparaxiality on self-focusing collapse. In addition, this text reprints three key articles in the field, as well as the paper that describes the first laboratory observation of self-focusing phenomena with photographic evidence. Self-focusing: Past and Present is of interest to scientists and engineers working with lasers and their applications, as well as students, researchers, and laser and eye surgeons.