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Effects; Apologia; Polarization States and the Stokes-Poincare Picture; Linear Birefringence of Transmission Fibers; Soliton Propagation; Polarization Scattering by Soliton-soliton Collisions; Hardware and Measurement Techniques; Soliton Sources; The Temporal Lens; Clock Recovery; Dispersion Measurement; Accurate Measurement of Pulse Widths Using a Detector with Finite Response Time; Flat Raman Gain for Dense WDM; A Sample Maple Program for the ODE Method; A.1. Introduction; A.2. The Maple Program; A Brief History of Solitons B.1. Apologia B.2. The Beginning: John Scott Russell and His Discovery; B.3. Solitons in Optical Fibers; B.4. The Soliton Legacy; References; Index

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## Sommario/riassunto

Solitons are waves that retain their form through obstacle and distance. Solitons can be found in hydrodynamics, nonlinear optics, plasma physics, and biology. Optical solitons are solitary light waves that hold their form over an expansive interval. Conservation of this form creates an effective model for long distance voice and data transmission. The application of this principle is essential to the technology of wired communications. Optical solitons produce crystal clear phone calls cross-country and internationally. It is because of these that someone on the other end of the phone

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