1. Record Nr. UNINA9910484470703321

Autore	Ambrosio Vincenzo
Titolo	Nonlinear Fractional Schrödinger Equations in R^N / / by Vincenzo Ambrosio
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2021
ISBN	3-030-60220-6
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (669 pages)
Collana	Frontiers in Elliptic and Parabolic Problems, , 2730-5503
Disciplina	530.124
Soggetti	Differential equations Operator theory Global analysis (Mathematics) Manifolds (Mathematics) Differential Equations Operator Theory Global Analysis and Analysis on Manifolds
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preliminaries -- Some abstract results -- Fractional scalar field equations -- Ground states for a pseudo-relativistic Schrödinger equation -- Ground states for a superlinear fractional Schrödinger equation with potentials -- Fractional Schrödinger equations with Rabinowitz condition -- Fractional Schrödinger equations with del Pino-Felmer assumptions -- Fractional Schrödinger equations with superlinear or asymptotically linear nonlinearities -- Multiplicity and concentration results for a fractional Choquard equation -- A multiplicity result for a fractional Kirchho equation with a general nonlinearity -- Multiplicity and concentration of positive solutions for a fractional Kirchho equation -- Concentrating solutions for a fractional Kirchho equation with critical growth -- Multiplicity and concentration results for a fractional Schrödinger Poisson system with critical growth -- An existence result for a fractional Kirchho -Schrödinger-Poisson system -- Multiple positive solutions for a non-homogeneous fractional Schrödinger equation -- Sign-changing solutions for a

	fractional Schrödinger equation with vanishing potentials -- Fractional Schrödinger equations with magnetic fields.
Sommario/riassunto	n< i="">n This monograph presents recent results concerning nonlinear fractional elliptic problems in the whole space. More precisely, it investigates the existence, multiplicity and qualitative properties of solutions for fractional Schrödinger equations by applying suitable variational and topological methods. The book is mainly intended for researchers in pure and applied mathematics, physics, mechanics, and engineering. However, the material will also be useful for students in higher semesters and young researchers, as well as experienced specialists working in the field of nonlocal PDEs. This is the first book to approach fractional nonlinear Schrödinger equations by applying variational and topological methods.