

1.	Record Nr.	UNINA990003940920403321
	Autore	Hague, Douglas Chalmers <1929- >
	Titolo	Breviario di economia / D.C. Hague, A.W. Stonier
	Pubbl/distr/stampa	Bari : Laterza, 1967
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	Altri autori (Persone)	Stonier, Alfred W.
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	Collocazione	S C/1 HAG
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	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Trad. di: The essentials of economics, c1964
2.	Record Nr.	UNINA9910311936503321
	Autore	Izaac Joshua
	Titolo	Computational Quantum Mechanics / / by Joshua Izaac, Jingbo Wang
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
	ISBN	3-319-99930-3
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	Descrizione fisica	1 online resource (XIII, 494 p. 1 illus.)
	Collana	Undergraduate Lecture Notes in Physics, , 2192-4791
	Disciplina	530.12
	Soggetti	Quantum theory Physics Atomic structure Molecular structure Quantum Physics Numerical and Computational Physics, Simulation Atomic/Molecular Structure and Spectra
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Livello bibliografico

Monografia

Nota di contenuto

Part I Scientific programming: an introduction for physicists: Numbers and precision -- Fortran -- Python -- Part II Numerical methods for quantum physics: Finding roots -- Differentiation and initial value problems -- Numerical integration -- The eigenvalue problem -- The Fourier transform -- PART III Solving the Schrödinger equation: One dimension -- Higher dimensions and basic techniques -- Time propagation -- Central potentials -- Multi-electron systems -- Exercises.

Sommario/riassunto

Quantum mechanics undergraduate courses mostly focus on systems with known analytical solutions; the finite well, simple Harmonic, and spherical potentials. However, most problems in quantum mechanics cannot be solved analytically. This textbook introduces the numerical techniques required to tackle problems in quantum mechanics, providing numerous examples en route. No programming knowledge is required – an introduction to both Fortran and Python is included, with code examples throughout. With a hands-on approach, numerical techniques covered in this book include differentiation and integration, ordinary and differential equations, linear algebra, and the Fourier transform. By completion of this book, the reader will be armed to solve the Schrodinger equation for arbitrarily complex potentials, and for single and multi-electron systems.