

1. Record Nr.	UNINA9910739419603321
Autore	Milton Kimball A
Titolo	Schwinger's Quantum Action Principle : From Dirac's Formulation Through Feynman's Path Integrals, the Schwinger-Keldysh Method, Quantum Field Theory, to Source Theory / / by Kimball A. Milton
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-20128-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (122 p.)
Collana	SpringerBriefs in Physics, , 2191-5423
Disciplina	530.143
Soggetti	Quantum theory Physics Mathematical physics Quantum Physics History and Philosophical Foundations of Physics Mathematical Applications in the Physical Sciences Mathematical Methods in Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Historical introduction -- Review of classical action principles -- Classical field theory - electrodynamics -- Quantum Action Principle -- Time-cycle or Schwinger-keldysh Formulation -- Relativistic Theory of Fields -- Nonrelativistic Source theory -- Concluding remarks.
Sommario/riassunto	Starting from the earlier notions of stationary action principles, these tutorial notes shows how Schwinger's Quantum Action Principle descended from Dirac's formulation, which independently led Feynman to his path-integral formulation of quantum mechanics. Part I brings out in more detail the connection between the two formulations, and applications are discussed. Then, the Keldysh-Schwinger time-cycle method of extracting matrix elements is described. Part II will discuss the variational formulation of quantum electrodynamics and the development of source theory.