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Title:	Geometric phases for finite-dimensional systems—The roles of Bargmann invariants, null phase curves, and the Schwinger–Majorana SU(2) framework
Authors:	Arvind (/jspui/browse?type=author&value=Arvind)
Keywords:	Majorana theorem Finite-dimensional systems Geometric phases
Issue Date:	2020
Publisher:	American Institute of Physics Inc.
Citation:	Journal of Mathematical Physics, 61(7)
Abstract:	We present a study of the properties of Bargmann Invariants (BIs) and Null Phase Curves (NPCs) in the theory of the geometric phase for finite dimensional systems. A recent suggestion to exploit the Majorana theorem on symmetric SU(2) multispinors is combined with the Schwinger oscillator operator construction to develop efficient operator-based methods to handle these problems. The BI is described using intrinsic unitary invariant angle parameters whose algebraic properties as functions of Hilbert space dimension are analyzed using elegant group theoretic methods. The BI-geometric phase connection, extended by the use of NPCs, is explored in detail, and interesting new experiments in this subject are pointed out.
Description:	Only IISERM authors are available in the record.
URI:	https://aip.scitation.org/doi/10.1063/1.5124865 (https://aip.scitation.org/doi/10.1063/1.5124865) http://hdl.handle.net/123456789/3274 (http://hdl.handle.net/123456789/3274)
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