



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/3504>

Title:	A quantum-trace determinantal formula for matrix commutators, and applications
Authors:	Khurana, Dinesh (/jspui/browse?type=author&value=Khurana%2C+Dinesh)
Keywords:	Binary quadratic forms Determinants Diophantine equations Matrix commutators
Issue Date:	2012
Publisher:	Elsevier
Citation:	Linear Algebra and Its Applications, 436(7), pp.2380-2397.
Abstract:	In this paper, we establish a determinantal formula for 2×2 matrix commutators $[X, Y] = XY - YX$ over a commutative ring, using (among other invariants) the quantum traces of X and Y . Special forms of this determinantal formula include a "trace version", and a "supertrace version". Some applications of these formulas are given to the study of value sets of binary quadratic forms, the factorization of 2×2 integral matrices, and the solution of certain simultaneous diophantine equations over commutative rings.
Description:	Only IISERM authors are available in the record.
URI:	https://www.sciencedirect.com/science/article/pii/S0024379511005222?via%3Dihub (https://www.sciencedirect.com/science/article/pii/S0024379511005222?via%3Dihub) http://hdl.handle.net/123456789/3504 (http://hdl.handle.net/123456789/3504)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/3504/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text	View/Open (/jspui/bitstream/123456789/3504/1/Need%20to%20add%20pdf.odt)

[Show full item record \(/jspui/handle/123456789/3504?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/3504/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.