



## New Constructions in Classical Invariant Theory

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By Peter Frenkel

LAP LAMBERT Academic Publishing. Paperback. Book Condition: New. Paperback. 68 pages. Dimensions: 8.6in. x 5.8in. x 0.2in. The three topics discussed in the three chapters of this thesis are only loosely related. Strictly speaking, only Chapter 1 is about invariant theory. Namely, it is shown that the invariant theory of the orthogonal group acting on the direct sum of several copies of the standard vector representation differs drastically over fields of characteristic 2 from the well-known theory in all other characteristics. As a result, we encounter non-classical behaviour also over the ring of integers. In Chapter 2, we work over the field of complex numbers. We obtain new formulae for the irreducible characters of the classical matrix groups, more specifically, we express them as fractions of polynomials in the entries of matrix powers. Our formulae can be viewed as unexpected constructions of conjugation invariant functions of matrices. In Chapter 3, we work over the real field, and we prove inequalities for positive semi-definite matrices. Chapter 3 is the most down-to-earth part of this thesis, it ends with an application to the problem of bounding from below the norm of a product of linear functionals. This item ships from multiple locations. Your...



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