Institut für Geometrie

Vortrag

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Seminarraum 2, Kopernikusgasse 24

The geometry of indefinite binary quadratic forms

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The problem of classifying the indefinite binary quadratic forms with integer coefficients is solved by introducing a special partition of the de Sitter world, where the coefficients of the forms lie, into separate domains. Under the action of the special linear group acting on the integer plane lattice, each class of indefinite forms has a well-defined finite number of representatives inside each such domain. Finally, we show the relation between the symmetry-types of classes of binary integer indefinite quadratic forms and the symmetry types of the periods of the continued fractions of quadratic irrationalities.

Oleg Karpenkov