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THE HIGHER-DIMENSIONAL THETA FUNCTIONS, AND AN INTERESTING APPLICATION

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Abstract

To an algebraic curve C over the complex numbers one can associate a non-negative integer g , the genus, as a measure of its complexity. One can also associate to C , via complex analysis, a $g \times g$ symmetric matrix Ω called period matrix. Because of the natural relation between C and Ω , one can obtain information about one by studying the other. Therefore, it makes sense to consider the inverse problem: Given a period matrix Ω , can we compute a model for the associated curve C . In this talk, we will introduce theta functions associated to a period matrix and see their role in answering the question above.

Date : Wednesday, August 25, 2021

Time: 09:00

Place: IMBM Seminar Room, Bogazici University South Campus