

abstract

COMPLEX ALGEBRAIC GEOMETRY

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

In this talk, we have two subjects.

I. Partial toroidal compactifications and moduli of PLH.

II. The eight enlargements of Griffiths domain D and the fundamental diagram.

For I, we have

Theorem.

For a given pair of global monodromy and fan, there exists the fine moduli space of PLH with a level structure of the global monodromy whose local monodromies are in the directions in the fan.

This is a generalization of toroidal compactifications by Mumford and others to the case of Griffiths domains which are no longer Hermitian symmetric in general. Now we can talk about extensions of period maps for surfaces of general type, Calabi-Yau 3-folds, ... Even in Hermitian symmetric case, this moduli theoretic viewpoint is new.

For II, we have Fundamental Diagram consisting of eight enlargements of D and maps among them.

As a corollary, we can describe the relation between a toroidal compactification and Borel-Serre compactification. Even in Hermitian symmetric case, this is a new observation.

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We will mention briefly generalizations of the above results to mixed case, and some applications.