



FMSP Lectures

以下の要領で FMSP-IPMU 特別セミナーを開催しますのでご案内致します。

世話人: 河野俊丈、斎藤恭司

日時: 2015 年 4 月 24 日(金)10:30-12:00、13:30-15:00、15:30-17:00

場所: IPMU 4階、バルコニー A

講師: 眞野 智行 (琉球大学)

表題: アイソモノドロミー変形空間上の平坦構造

アブストラクトは以下の英語表示をご覧ください。

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We shall have a FMSP-IPMU special seminar as follows.

Speaker: Tomoyuki Mano (Ryuukyu University)

Title: Flat structure on isomonodromic deformations

Date: Fri, April 24, 2015, 10:30-12:00, 13:30-15:00, 15:30-17:00

Place: Balcony A, IPMU

Abstract:

The WDVV (Witten-Dijkgraaf-Verlinde-Verlinde) equation was found by physicists in 2D topological field theory. B. Dubrovin proved by introducing the notion of Frobenius manifolds that there exists a correspondence between solutions to the WDVV equation and isomonodromic deformations of linear differential equations with special conditions.

(In $n=3$ case, the ($n=3$) WDVV equation is equivalent to a one-parameter family of the sixth Painleve equations.) The main purpose of this talk is to generalize the WDVV equation so that the generalized equation will be equivalent to isomonodromic deformations of generic linear differential equations of Okubo type. I will also show the existence of a "flat generator systems" of invariant polynomials for the standard action of a finite complex reflection group. This is a generalization of K. Saito's result for finite Coxeter groups.

The talk will proceed along the following line: 1. I will introduce a completely integrable system of differential equations of Okubo type in several variables and explain some basic facts about logarithmic vector fields along a divisor. 2. I will introduce a geometric structure called "Saito structure without metric" which is presented in C. Sabbah's textbook. 3. I will show that it is possible to construct a Saito structure without metric on the space of the independent variables of a generic Okubo type system in several variables. The existence of flat generator systems for finite complex reflection groups is a consequence of this construction.