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学際融合教育研究推進センター
特別招へい教授



スーパーグローバルコース数学特別講義2

Vertex Operator Algebras and Integrable Systems

July 23 - 26, 2018

Monday, July 23	14:00-17:00
Tuesday, July 24	14:00-17:00
Wednesday, July 25	15:00-17:00
Thursday, July 26	15:00-17:00

127 Conference Room
Faculty of Science Bldg. #3
Kyoto University

Boris Feigin

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First I plan to discuss the known ways of constructing vertex operator algebras. We can use "screenings" - it means that we can find the vertex operator subalgebras into the known ones. Opposite idea - extensions of VOA. In this case we are trying to embed the algebra into the bigger. I present the basic examples of these constructions. We discuss W-algebras and their applications. Vertex algebras produce D-modules on the interesting geometric objects. So we will talk about Hitchin systems and D-modules appearing in geometric Langlands - usual and quantum.

After that I explain what to do if we have the system of screening corresponding to the affine root system. They do not define vertex algebra but something which has not good name. The object which we get by this way is rather close to the non-conformal field theories and contains the integrable system - commutative algebra of KdV type.

❖ 本講義は「スーパーグローバルコース数学特別講義2」として大学院の学生には1単位認定されます。



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