



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Constructing crystalline representations of the étale fundamental group of a  $p$ -adic curve via stable Higgs bundles**

报告人: Professor Kang Zuo

(Mainz University)

报告时间: 2017-03-24 星期五 16:00-17:00

报告地点: 光华东主楼 1501

摘要: In a joint program with G-T. Lan and M. Sheng we have established a  $p$ -adic Hitchin- Simpson correspondence: given a smooth proper scheme  $X$  over the Witt ring  $W$  of a finite field  $F_q$  of characteristic  $p$ , then the category of  $GL_r$ -crystalline representations of the étale fundamental group of  $X$  over the fraction field  $K$  of  $W$  is equivalent to the category of periodic graded Higgs bundles on  $X$ . In a recent joint paper with R-R.Sun and J-B.Yang we have worked out a  $PGL$ -version of the  $p$ -adic Hitchin- Simpson correspondence between the category of  $PGL_r$ -crystalline representations of the étale fundamental group of  $X/K$  and the category of periodic graded Higgs bundles after twisting line bundles. As an application one shows that the étale fundamental group of ...

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