

12月23日王诗晟: Systoles of hyperbolic surfaces with big cyclic symmetry

(曹锡华数学论坛)

讲座题目: Systoles of hyperbolic surfaces with big cyclic symmetry

主讲人: 王诗晟教授 (北京大学)

开始时间: 2018-12-23 (周日) 13:30-14:30

讲座地址: 中北校区理科大楼 A510 报告厅

主办单位: 数学科学学院、科技处

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王诗晟, 北京大学教授, 国际著名低维拓扑学家, 中国科学院院士。

摘要: We obtain the exact values of the systoles of these hyperbolic surfaces of genus g with cyclic symmetries of the maximum order and the next maximum order. Precisely: for genus g hyperbolic surface with order $4g + 2$ cyclic symmetry, if g is at least 7, then the systole is

$$2\operatorname{arccosh}\left(1 + \cos\frac{\pi}{2g+1} + \cos\frac{2\pi}{2g+1}\right);$$

for genus g hyperbolic surface with order $4g$ cyclic symmetry, if g is at least 4, then the systole is

$$2\operatorname{arccosh}\left(1 + 2\cos\frac{\pi}{2g}\right).$$