



复旦大学数学科学学院 数学综合报告会

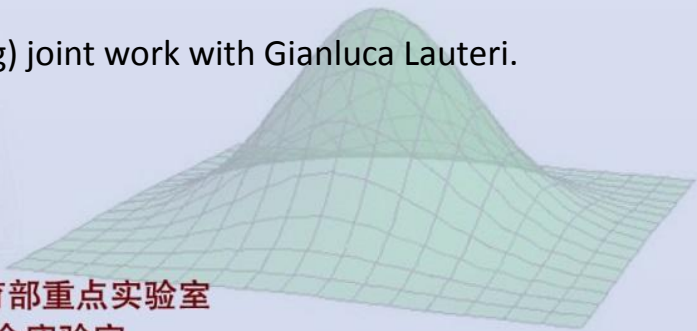
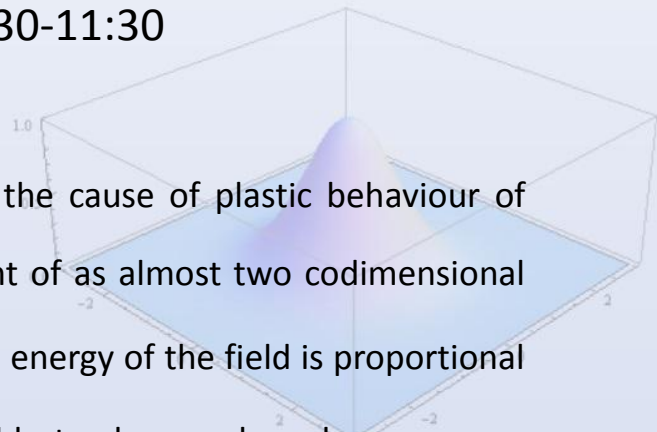
报告题目: **Geometric rigidity and the low energy configurations of dislocations**

报告人 Prof. Stephan Luckhaus
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报告时间: 2017-03-24 星期五 10:30-11:30

报告地点: 光华东主楼 1801

摘要: In continuum physics dislocations are the cause of plastic behaviour of metals. But mathematically they may be thought of as almost two codimensional concentrations of the curl of a matrix field. If the energy of the field is proportional to the square distance to $SO(n)$, then we are able to show a sharp lower energy bound depending on dislocation density in the framework of the geometric rigidity bounds of Friesecke, James, Mueller and others. One (and the main) consequence is that low energy configurations are close to piecewise constant functions with values in $SO(n)$. Most of the results are (ongoing) joint work with Gianluca Luteri.



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