



复旦大学数学科学学院 数学综合报告会

报告题目: **Applications of corner scattering: intrinsic properties of transmission eigenfunctions and single wave probing**

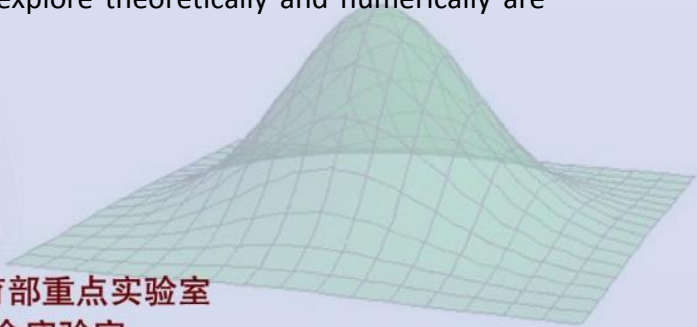
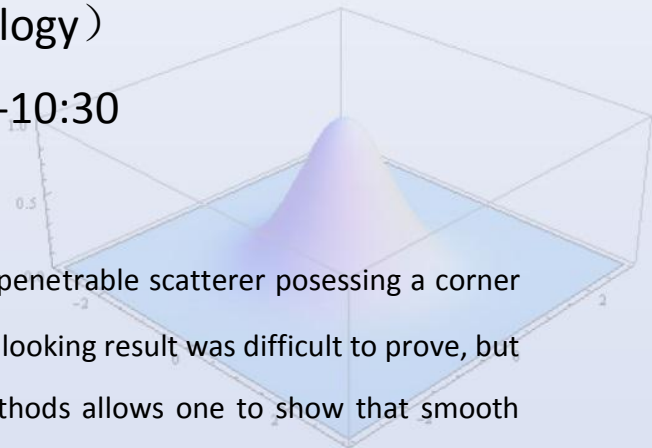
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报告时间: 2017-12-05 星期二 9:30-10:30

报告地点: 光华东主楼 1801

摘要: The theory of corner scattering shows that a penetrable scatterer possessing a corner singularity always scatters any incident wave. This simple looking result was difficult to prove, but has many interesting consequences. Applying those methods allows one to show that smooth enough interior transmission eigenfunctions vanish at convex corners. Another application is shape determination: two polyhedral scatterers of different shape (with some geometrical constraints) always produce different far-field patterns no matter the incident wave. Going further one can determine completely certain piecewise constant potentials by a single far-field measurement. Finally some possible future topics to explore theoretically and numerically are presented.



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