报告题目：The Weyl law revisited

报告人：徐国义 副教授 (清华大学数学科学系)

时间：周一（11.9）13:30-14:30；周二（11.10）10:30-11:30；周三（11.11）13:30-14:30；周四（11.12）13:30-14:30；周五（11.13）10:30-11:30

地点：周一（11.9）光华楼东主楼 1801；周二（11.10）H5-318；周三（11.11）光华楼东主楼 1801；周四（11.12）光华楼东主楼 1403；周五（11.13）H5-307

报告摘要：

H. Weyl proved the Weyl law about the limit behavior of eigenvalues for 2-dimensional domains. He claimed that his method also works in higher dimensional case. For Dirichlet eigenvalues, his claim can be verified directly. The case of Neumann eigenvalues is not trivial due to the lack of monotonicity comparison results in this case.

In our lectures, we provide a detailed proof of the Weyl law for all dimensions, following the Weyl's original method of 'cuttingpasting'. The key technical idea is linear approximation of any domain and its related comparison results for eigenvalues. Our proof is elementary in the sense that the preliminary knowledge for the lectures is basic calculus and linear algebra. But the method may be helpful for other related problems because this elementary proof is robust and flexible. The talk will be given on blackboard, with detailed computation line by line, any question or comment are welcome.

This is the joint work with Weiwei Wang and Zuoqin Wang.