Colloquium

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100 YEARS OF WEYL’S LAW

Friday, February 17, 2012
3:00 p.m. in ES-143
(tea & coffee at 2:30 p.m. in ES-152)

ABSTRACT. In 1911–1912 Hermann Weyl published two papers (more followed) describing the distribution of the eigenvalues of the Dirichlet Laplacian in a bounded domain. These were among the first publications by Weyl and a new exciting field of mathematics was created.

I will discuss:

• Weyl law with sharper remainder estimates (in particular, Weyl conjecture);
• Generalized Weyl law;
• When the generalized Weyl law works and when it does not and how it should be modified;
• What should be used instead of the eigenvalue counting function when the spectrum is not necessarily discrete;
• Weyl law and Thomas-Fermi theory.