

ANALYSIS AND DIFFERENTIAL GEOMETRY
SEMINAR

Off-diagonal Weyl Laws for Commuting Selfadjoint Operators

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Abstract: The Weyl Law concerns the asymptotics of the eigenvalue counting function for, amongst other operators, Laplacians on compact manifolds. In this talk, we focus on the joint spectrum for commuting selfadjoint operators on compact manifolds (a special case being the joint spectrum for the Laplacian and the generator for rotations on a surface of revolution). In joint work with Blake Keeler (CRM Montréal and AARMS Halifax), we prove a corresponding "off-diagonal" Weyl asymptotic in this setting. Such an asymptotic describes the covariance function for certain types of "random waves" and gives a complementary eigenvalue counting result to that of Colin de Verdière from 1979.

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