DIFFERENTIAL GEOMETRY/PDE SEMINAR

Wednesday, September 15
Padelford C-401
3:45 pm

Analytic singularities of the dynamical zeta function for the billiard ball map

Vesselin Petkov
(Université Bordeaux, France)

We study the dynamical zeta function $Z_D(s)$ related to the periodic trajectories of the billiard flow for several disjoint strictly convex bodies in $\mathbf{R}^3$. We show that the analytic properties of $Z_D(s)$ close to the line of absolute convergence $\Re s = s_0$ are similar to the behaviour close to the line $\Re s = 1$ of the inverse $Q(s) = \frac{1}{R(s)}$ of the classical Riemann zeta function $R(s)$.