UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

COLLOQUIUM

Professor Eugene Gutkin
(Copernicus University, Torun, Poland / Math Institute Polish Academy of Sciences)

"Security and Flatness for Riemannian Manifolds, Especially Surfaces"

Abstract: A pair of points in a Riemannian manifold is secure if the geodesics between the points can be blocked by a finite number of point obstacles; otherwise the pair is insecure. A manifold is secure if all pairs of its points are secure. A manifold is insecure if an insecure point pair exists.

Compact, flat manifolds are secure. A standing conjecture says that these are the only secure, compact Riemannian manifolds. In a joint work with Victor Bangert, we proved this for surfaces of genus greater than zero. I will report on this and related works.

(Note: This is a joint with Math Physics Seminar.)

Thursday, February 4th, 2010
Surge 284
4:10-5:00pm
Tea Time at 3:40pm