

# LOCAL DIFFERENTIAL GEOMETRY AND LÉVY'S OCCUPATION TIME ARCSINE LAW

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**Abstract:** We discuss an extension of the classical Lévy's arcsine law for occupation time of Brownian motion to a Riemannian manifold. The two term asymptotic expansion of the occupation time of the local half space is related to the Brownian motion local time and the mean curvature of the embedded hypersurface.