

Joint IAS-PU Symplectic Geometry Seminar

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Resonance for Loop Homology on Spheres

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Date & Time: Fri, 03/15/2013 - 13:30 - 14:30

Location: S-101

Video Link:

<http://video.ias.edu/jointiaspu/1213/0315-NancyHingston>

Fix a metric (Riemannian or Finsler) on a compact manifold M . The critical points of the length function on the free loop space LM of M are the closed geodesics on M . Filtration by the length function gives a link between the geometry of closed geodesics, and the algebraic structure given by the Chas-Sullivan product on the homology of LM and the "dual" loop cohomology product. If X is a homology class on LM , the "minimax" critical level $Cr(X)$ is a critical value of the length function. Gromov proved that if M is simply connected, there are positive constants k and K so that for every homology class X of degree $> \dim(M)$ on LM , $k \deg(X)$

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terms:

- [School of Mathematics](#)