# 青年学术论坛邀请报告

报告人：James Fullwood

单位：The University of Hong Kong

时间：03月29日（周二）13:00–14:00

邀请人：杜荣

地点：闵行数学楼4楼新报告厅

题目：On extending the Gauss-Bonnet-Chern theorem to singular varieties

摘要：The first deep theorem of differential geometry after Gauss' Theorem Egregium was the Gauss-Bonnet Theorem, which says that the integral of the Gaussian curvature of a compact orientable surface without boundary is equal to $2\pi$ times its topological Euler characteristic. This theorem established for the first time a deep link between geometry and topology, and paved the way for vast generalizations such as the Grothendieck-Riemann-Roch theorem, the Atiyah-Singer index theorem and the Gauss-Bonnet-Chern theorem, which is the most direct generalization of the classical Gauss-Bonnet theorem to complex manifolds. In this talk, we discuss different generalizations of the Gauss-Bonnet-Chern theorem to singular varieties, some of which come from theoretical physics.

James Fullwood 个人简介：

James Fullwood毕业于Florida State University 数学系，从2012年至今为香港大学数学系博士后。研究兴趣为代数几何、数学物理、奇点理论及特征类。