简 报

球面上简单闭曲线的等周不等式

山东菏泽学院 数学系，山东 菏泽 274015

Isoperimetric Inequality of Simple Spherical Closed Curve

Department of Mathematics, Heze University of Shandong, Heze 274015,China

摘要　|　参考文献　|　相关文章

Download: PDF (796KB)　HTML 1KB　Export: BibTeX or EndNote (RIS)　　Supporting Info

摘要 等周不等式反映了周长固定的闭曲线其周长和所围区域面积之间的关系。本文通过适当选取球面上单位法向量的方向，即由球面指向球心，得到球面曲线曲率及测地曲率的表达式，利用曲面上的高斯－波涅公式在球面上推广了该不等式，得出了球面上简单闭曲线的等周不等式：

$L \geq 2\pi - \sum_{i=1}^{m}(\pi - \alpha_i)R \quad 2 - \sigma R \quad \tan \theta_0$.

关键词： 球面闭曲线;等周不等式　高斯－波涅公式;测地曲率

Abstract： Isoperimetric inequality shows the relation of perimter and area that the closed curve edcircles with its perimeter fixed. In this paper, the author get curvature and geodesic curvature of spherical closed curves by selecting properly the direction of unit normal vector on the sphere, that is, from sphere to the center of its. Using GassBonnet Formular the isoperimetric inequality of simple spherical closed curve is promoted.

Keywords： simple spherical closed curve　isoperimetric inequality　Gass　Bonnet Formular　geodesic curvature

Service
- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- Email Alert
- RSS

作者相关文章