國立交通大學應用數學系
學術演講公告

主講人：黃彥彰教授(台南大學應用數學系)

講　　題：Cauchy surface area formula in the Heisenberg groups

時　　間：109 年 11 月 10 日(星期二) 下午 14:00 –15:00

地　　點：(光復校區) 科學一館 223 室

茶　　會：當天下午 13:30 (科學一館 205 室)

Abstract

At the beginning of the talk, we will introduce some background of Cauchy surface area formula for finding the surface area of a convex body in n-dimensional Euclidean spaces. The formula is one of important results in Integral Geometry and Convex Geometry with applications to other scientific fields, for instance, the image processing and tomography. It states that the surface area of a convex body can be obtained by the average of all projected areas onto all subspaces of codimension one in the Euclidean space. Then we will show an analogy in the Heisenberg groups which are in a class of standard models in sub-Riemannian geometry, contact geometry, and pseudo-hermitian geometry. Unlike the Gauss maps in Riemannian manifolds defined on the round spheres, we use the Pansu spheres to define the Gauss maps and develop the formula for surface areas (called p-areas). Besides, instead of considering the convex bodies in the Euclidean spaces, we make a weaker assumption for the formula and have a similar result.

敬請公告　　歡迎參加

應用數學系　啟