



2013年微分幾何和辛幾何研討會

The joint workshop on differential and symplectic geometry in 2013

時間: 2013年11月29號 (星期五)

報名: 請當天10:00-10:30前報到 研討會從10:30開始

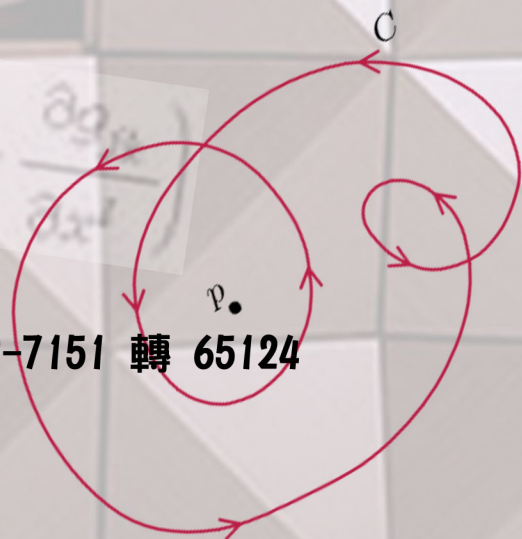
主題: Flows and the local embedding problem
On the singularities of the Szego projections on CR manifolds.
The study of Legendrian submanifolds in Heisenberg groups

主辦人: 中央大學數學系 邱鴻麟

地點: 中央大學 鴻經館 M302

聯絡人: 中央大學數學系 陳玉欣 Tel: (03)422-7151 轉 65124

歡迎各位報名參與!



2013 年微分幾何和辛幾何研討會

日程表

2013 年 11 月 29 日（星期五）	
10:00 10:30	報到
10:30 12:00	【演講第一場】 講師：鄭日新 研究員/中央研究院 主持人：蕭欽玉
12:00 13:30	午餐
13:30 15:00	【演講第二場】 講師：蕭欽玉 助研究員/中央研究院 主持人：鄭日新
15:00 15:20	中場休息
15:20 16:50	【演講第三場】 講師：賴馨華 博士後研究/中央研究院 主持人：鄭日新

Time: 10:30~12:00

Title: "Flows and the local embedding problem"

Speaker: 鄭日新（中央研究院）

Abstract:

The embedding problem for CR structure has been one of the fundamental problems in the study of CR manifolds. For the global embeddability, we know that a closed (compact with no boundary) strongly pseudoconvex CR manifold of dimension $2n+1$ is always embeddable for $n \geq 2$ (Boutet de Monvel) while it is not always so for $n=1$ (Rossi, Andreotti-Siu). For the local embeddability, it is true for $n \geq 3$ (Kuranishi for $n \geq 4$, Webster for $n \geq 3$) while it is not always true for the $n=1$ case (Nirenberg) and it is an open problem for the $n=2$ case. In this talk, I would like to propose an approach of geometric flows to the local embedding problem.

Time: 12:00~13:30

午餐:

Time: 13:30~15:00

**Title: “On the singularities of the Szego projections on
CR manifolds.”**

Speaker: 蕭欽玉（中央研究院）

Abstract:

In this talk, I will report the first part of my paper(Projections in several complex variables, Mem. Soc. Math. France, 2010, 131 p.).

In this work, we completely study the heat equation method of Menikoff-Sjostrand and apply it to the Kohn Laplacian defined on a compact orientable connected CR manifold.

We then get the full asymptotic expansion of the Szego projection for $(0, q)$ forms when the Levi form is non-degenerate.

Time: 15:00~15:20

Tea Break

Time: 15:20~16:50

**Title: “The study of Legendrian submanifolds in
Heisenberg groups”**

Speaker: 賴馨華（中央研究院）

Abstract:

We study the local equivalence problems of Legendrian submanifolds in Heisenberg groups via Cartan's method of moving frames and Lie groups. We also study the integrability conditions for Legendrian submanifolds and show some kind of embedding theorems for submanifolds satisfying the integrability conditions.