THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Geometry Seminar

Lê cycles and Milnor classes

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Abstract

Lê cycles and Milnor classes come from two distinct branches of singularity theory. The Lê cycles, introduced by David Massey, are analytic cycles that describe the diffeomorphism type of the Milnor fibre of holomorphic map-germs. This concept can be extended to codimension one analytic subvarieties Z of a compact complex manifolds M; one gets global Lê cycles, obtained by "gluing" the local Lê cycles. On the other hand, the Milnor classes of Z come from the theory of Chern classes for singular varieties. Milnor classes are defined as the difference between the Schwartz-McPherson and the Fulton-Johnson classes, both of these being extensions to compact singular varieties of the classical Chern classes of complex manifolds.

I will speak about joint work with R. Callejas-Bedregal and M. Morgado, throwing light on the relation between these two concepts. Our results actually show that although Milnor classes and Lê cycles arise from apparently different sources, they encode essentially the same information concerning the geometry and topology of the singular varieties.

Date: April 16, 2013 (Tuesday)

Time: 4:00 – 5:00pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome