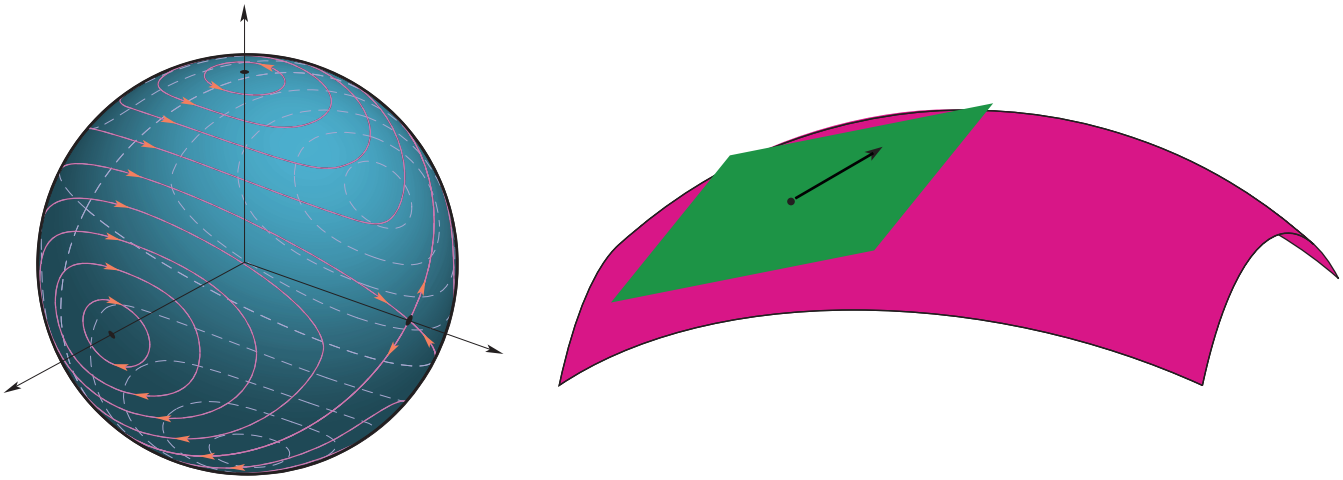
CDS 202

Geometry of Nonlinear Systems

Second Term, Winter 2010
Tu, Th 1:00 pm –2:30 pm
Room 214 Steele

CDS 202 is a foundation course for students who wish to pursue geometric mechanics and geometric control theory.

In addition, those in fluid mechanics, elasticity, computational mechanics, computational geometry and variational integrators will find this course helpful.



Course Description

Basic manifold theory and differential geometry oriented toward applications in control and dynamical systems. Topics include smooth manifolds and mappings, tangent and normal bundles, vector fields, flows, distributions. Frobenius' Theorem, Lie groups and Lie algebras, exterior differential forms, tensors, Lie derivatives and Stokes Theorem. (9 units).

Instructors: François Gay-Balmaz and Jerrold E. Marsden
http://www.cds.caltech.edu/~marsden

For futher information, see
http://www.cds.caltech.edu/~marsden/cds202-10/home