### THE UNIVERSITY



### OF HONG KONG

# Institute of Mathematical Research Department of Mathematics

## **LECTURES ON GEOMETRY**

## Rational Homogeneous Manifolds

(Lecture III)

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#### **Abstract**

A rational homogeneous manifold is a complex projective variety homogeneous under a complex semisimple group. The orbits of a Borel subgroup form a cell-decomposition; the closures of these cells are Schubert varieties. A main goal is to understand subvarieties having a certain type of homology class. In these introductory lectures we present some basic results on rational homogeneous manifolds and Schubert varieties, relating to this problem.

Date: November 11, 2010 (Thursday)

Time: 3:00 - 4:00pm

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