Schubert slices in the combinatorial geometry of flag domains

Ana-Maria Brecan

Abstract

In this talk I will describe the results I have obtained as part of my Ph.D project on the study of spaces of naturally defined cycles. These are compact complex submanifolds in open orbits of real semisimple Lie groups in flag domains of their complexification. It is known that there are optimal Schubert varieties which intersect the cycles transversally in finitely many points and determine them in homology. In the talk we will describe the Schubert varieties for the real forms G_0 of $SL(n, \mathbb{C})$ and give details in the case of the real form $G_0 = SL(n, \mathbb{R})$.

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