What is Schubert calculus?

Haniya Azam (LUMS)

25 May, 14:30 - 15:30

AS-SMS, Lahore

Nearly 150 years ago Schubert published his book on 'Calculus of Enumerative Geometry'. As the name suggests, his work was about finding number of points, lines, planes etc., and was the first systematic study of what is now called Intersection Theory. Highly intuitive to begin with, this work became rigorous later on by the introduction of Schubert Varieties.One beautiful aspect of this subject is that geometric information about these varieties lies in the combinatorics of partitions.

In this talk we will introduce Schubert varieties inside a Grassmanian (more generally, a Flag) manifold. This will be followed by Schubert Calculus- an application of intersection theory to problems in enumerative geometry. Lastly, we will be demonstrating what generates the cohomology of this manifold. Hopefully, we will have enough time to give concrete examples.

Abdus Salam School of Mathematical Sciences

68-B New Muslim Town, Lahore