



Mathematics and CS Seminar

Parabolic geometries, BGG sequences and geometry at infinity

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Generalized flag varieties are homogeneous spaces of the form G/P , where G is a semisimple Lie group and P is a parabolic subgroup of G . If G is a complex semisimple group, these are exactly the compact homogeneous spaces of G and they are known as rational homogeneous varieties. I will start by exhibiting a geometric content in the action of G on G/P , thus leading to the idea of parabolic geometries. Next, I will discuss BGG (Bernstein-Gelfand-Gelfand) sequences based on a refinement of twisted de Rham complexes over G/P . In the second part of the talk, I will outline how this theory can be applied to the study of geometric compactifications and how it leads to several generalizations of the concept of conformally compact manifolds.

Thursday, March 29, 2018 01:00pm - 03:00pm

IST Austria Campus Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



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