Workshop on "Geometry of vector distributions, differential equations, and variational problems"

Abstacts of the talks

Andreas Cap (University of Vienna and Erwin Schrodinger Institute of Mathematical Physics, Austria) *Parabolic geometries determined by subbundles in the tangent bundle*

The general theory of parabolic geometries can be used to obtain canonical Cartan connections associated to certain types of subbundles in the tangent bundle. Among the examples covered by this are generic distributions of rank 2 in dimension 5, rank 3 in dimension 6, and rank 4 in dimension 7. Apart from existence of Cartan connections, this theory also provides a number of efficient tools to study the geometry of such distributions. In my lecture, I will discuss some applications of these tools to questions of infinitesimal automorphisms and infinitesimal deformations of such structures.