

Title: Equivalence problem of geometric structure

Speaker: Tetsuya Ozawa (Meijo Univ.)

Abstract: There has been many results on equivalence problems of geometric structures along with the method of É. Cartan, which consists of several processes of prolongations to higher order jet space, absorptions of torsion, extracting curvatures, and so on. In a series of joint works with Prof. H. Sato, we introduced it systems of linear PDEs in connection with certain geometric structures, such that the integrability condition of the system is equal to the vanishing of curvatures and its solutions give the equivalence maps.

In this talk, I will discuss on pseudo-Hermitian structure (roughly speaking, a contact form together with an integrable complex structure  $J$  along the contact distribution), and give a system of linear PDEs that solves the equivalence problem for pseudo-Hermitian structure in dimension three.