Talk on September 24, 2024, 11:30 - -21:30 pm

Speaker: **Prof. Francis Bischoff, University of Regina**

Title: Brane quantization of Toric Poisson varieties

Abstract:
The homogeneous coordinate ring of a projective variety may be constructed by geometrically quantizing the multiples of a symplectic form, using the complex structure as a polarization. In this talk, I will explain how a holomorphic Poisson structure allows us to deform the complex polarization into a generalized complex structure, leading to a non-commutative deformation of the homogeneous coordinate ring. The main tool is a conjectural construction of a category of generalized complex branes, which makes use of the A-model of an associated symplectic groupoid. I will explain this in the example of toric Poisson varieties. This is joint work with Marco Gualtieri (https://doi.org/10.1007/s00220-022-04315-y).