



UNIVERSITY OF CALIFORNIA,  
RIVERSIDE

DEPARTMENT OF MATHEMATICS  
COLLOQUIUM

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DR. RYUSHI GOTO  
OSAKA UNIVERSITY

“HOLOMORPHIC POISSON STRUCTURES  
AND GENERALIZED KÄHLER GEOMETRY”

In this talk we shall explain recent developments of generalized complex and generalized Kähler geometry. Unobstructed deformations of generalized Kähler structures are discussed and then it turns out that Holomorphic Poisson structures yield interesting examples of generalized Kähler manifolds of symplectic type. From a view point of the moment map, we shall introduce the notion of Einstein-Hermitian generalized connections over a generalized Kähler manifold of symplectic type. We construct moduli spaces of Einstein-Hermitian generalized connections which arise as the Kähler quotients. Kähler-Ricci solitons provide examples of Einstein Hermitian generalized connections and Einstein-Hermitian co-Higgs bundles and Poisson module are also discussed. This talk is based on the papers: [arXiv:1612.08190](https://arxiv.org/abs/1612.08190), [arXiv:1707.03143](https://arxiv.org/abs/1707.03143)

WEDNESDAY, NOVEMBER 1<sup>ST</sup>, 2017

SURGE 284

TEA TIME: 3:40 - 4:10 P.M.

TALK: 4:10—5:00 P.M.