

*Abstract for The 13th OCAMI-RIRCM Joint Differential Geometry
Workshop on Submanifold Geometry and Lie Theory*

Title: Equivariant holomorphic embeddings from the complex projective line into a complex Grassmannian of 2-planes

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Abstract: In this talk, we study a classification problem of $SU(2)$ -equivariant holomorphic embeddings of complex projective line $\mathbf{C}P^1$ into a complex Grassmannian of 2-planes $Gr_{n-2}(\mathbf{C}^n)$. In order to classify such maps, we study holomorphic vector bundles of rank 2 over $\mathbf{C}P^1$ with a $SU(2)$ -action, an invariant metric and an invariant connection. We classify such bundles and consequently we obtain the moduli space of $SU(2)$ -equivariant holomorphic maps. This talk is based on a joint work with Yasuyuki Nagatomo.