

1122-46-242

**Albert Jeu-Liang Sheu\*** (asheu@ku.edu). *Projective Modules over Quantum Projective Line.*

Taking a groupoid  $C^*$ -algebra approach to the study of the quantum complex projective spaces  $\mathbb{P}^n(\mathcal{T})$  constructed from the multipullback quantum spheres introduced by Hajac and collaborators, we analyze the structure of the  $C^*$ -algebra  $C(\mathbb{P}^1(\mathcal{T}))$  realized as a concrete groupoid  $C^*$ -algebra, and find its  $K$ -groups. Furthermore after a complete classification of the unitary equivalence classes of projections or equivalently the isomorphism classes of finitely generated projective modules over the  $C^*$ -algebra  $C(\mathbb{P}^1(\mathcal{T}))$ , we identify those quantum principal  $U(1)$ -bundles introduced by Hajac and collaborators among the projections classified. (Received August 15, 2016)