DILIAN YANG, University of Windsor, 401 Sunset Avenue, Windsor, ON, N9B 3P4
Endomorphisms and Modular Theory of 2-Graph C^*-Algebras

We consider endomorphisms and modular theory of the graph C^*-algebra of a 2-graph on a single vertex. We prove that there is a semigroup isomorphism between unital endomorphisms of a 2-graph C^*-algebra and its unitary pairs with a twisted property. We characterize when endomorphisms or automorphisms preserve the fixed point algebra of gauge automorphisms and its canonical masa. Some other properties of endomorphisms are also investigated.

As far as the modular theory is concerned, we show that the algebraic *-algebra generated by the generators of a 2-graph C^*-algebra with the inner product induced from a distinguished state is a modular Hilbert algebra. We will also discuss the type of the von Neumann algebra generated by its GNS representation.