Abstract

The thesis focuses on constructions of rings satisfying specified algebraic properties. The main object of research are Leavitt path algebra and the properties of ring annihilators. For Leavitt path algebras, denoted by $L_K(E)$, we present necessary and sufficient conditions for it to satisfy Property (A). In case of prime Leavitt path algebras, we construct a class of maximal commutative subalgebras. We also introduce a construction of a ring A satisfying the annihilator condition (a.c.), where neither the polynomial ring $A[x]$ nor the power series ring $A[[x]]$ satisfies this condition.

Keywords: Leavitt path algebras, annihilators, rings with Property (A), maximal commutative subalgebras, annihilator condition.