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Xiao Long Xin is a mathematical profession of the school of mathematics, Northwest University, China. He received the Ph.D. degree in mathematics from Gyeongsang National University, Korea in 1999. His major research interests lie in the areas of logical algebras and their applications, algebraic hyperstructure theory, fuzzy sets, fuzzy logic. He has published more than 140 papers, where 50 papers was indexed by SCI. Now, he has implemented 2 projects from National Natural Science Foundation. In 2013, He has presided over the completion of the research results "some logical algebra and fuzzy research" and got the second prize of Shaanxi province science and technology award.

L-structures and the generation of EQ-algebras

L-structure is widely used in the study of the solution of quantum Yang-Baxter equation and algebraic logic system. In this talk, L-equality algebras and the generation of EQ-algebras and the existence and representation of states on related algebraic structures are systematically studied, and its wide application in fuzzy reasoning and algebraic solution of quantum mathematical physics equations is discussed. The main research content: (1) introduce the concept of L-equality algebras, and study its related properties and the relations of other L-structures; (2) Study the existence and representation of states on EQ-algebras by using L-structures; (3) Establish the theory of pseudo L-structures, focusing on the relationship between pseudo-L-equality algebras and pseudo-L-EQ-algebras. This work will provide new methods and ideas for the study of L-structures, help to solve the problems of the existence and representation of states on EQ-algebras and pseudo EQ- algebras, and promote the exploration of some important mathematical and physical problems.