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Modular Bernstein algebras. (English summary)

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The mathematical modelling of certain facts of population genetics is the origin of algebraic structures which generally are commutative but not associative and which do not belong to any of the classic and well-known classes of non-associative algebras. The Bernstein algebras were introduced by Bernstein (1923) and describe the inheritance of populations in equilibrium after one generation. The “evolution operators” of Bernstein were taken up again by Y. I. Lyubich (1971) and incorporated by P. Holgate (1975) into the context of non-associative algebras.

The paper under review is an important contribution to the study of the Bernstein algebras whose lattices of subalgebras are modular. The author proves that such algebras must be genetic when the ground field is algebraically closed, and gives a complete classification.

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