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**Gregory P. Wene\*** (gpwene2011@hotmail.com), The University of Texas at San Antonio,  
Department of Mathematics, One UTSA Circle, San Antonio, TX 78249-0624. *Permutations of  
Cubical Arrays.*

The structure constants of an  $n$ -dimensional algebra  $A$  over a field  $F$  determine an  $n$ -by- $n$ -by- $n$  cube called the cubical array associated with the algebra  $A$ . Knuth permuted the indices of the cubical associated with a finite semifields to generate new geometries. We no longer require that the algebras be finite and ask "Is it possible to choose a basis for the algebra such any permutation of the indices of the structure constants leaves the algebra unchanged?" What are the associated algebras? We show that the property weakly quadratic is invariant under all permutations of the indices of the corresponding cubical array. We present two algebras for which the cubical array is invariant under all permutations of the indices. (Received February 18, 2013)