Abstract form

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Title of talk: Associative string functions .....

Abstract:

A *string function* over a nonempty set X is a function $F\colon X^* \to X^*$, where $X^* = \cup_{n\geq 1} X^n$. We say that such a function is *associative* if

$$F(\mathbf{xyz}) = F(\mathbf{x}F(\mathbf{y})\mathbf{z})\,, \qquad \mathbf{x},\mathbf{y},\mathbf{z} \in X^*,$$

where the tuple $\mathbf{xyz} \in X^*$ is obtained by concatenating the tuples $\mathbf{x}$, $\mathbf{y}$, and $\mathbf{z}$. We discuss this new property and describe certain classes of associative string functions. We also characterize the recently introduced preassociative functions as compositions of associative string functions with injective unary maps.