Reductions for presentations of (*n,m*)-semigroups induced by reductions for presentations of binary semigroups

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The talk reports results from the combinatorial theory of vector valued semigroups.

We are examining presentations of (*n,m*)-semigroups $\langle B, \Delta \rangle$ induced by presentations of binary semigroups $\langle B, \Lambda \rangle$ with a reduction φ (satisfying certain conditions). Using the reduction φ for $\langle B, \Lambda \rangle$ we have constructed a reduction ψ for the corresponding (*n,m*)-presentation $\langle B, \Delta \rangle$. Thus, the existence of a good description of the semigroup $\langle B, \Lambda \rangle$ implicates an existence of a good description of the induced (*n,m*)-semigroup with presentation $\langle B, \Delta \rangle$. The next step is to give an application of the obtained results i.e. to search for such presentations of binary semigroups that, by applying the construction above, induce new classes (varieties) of (*n,m*)-semigroups. As a consequence, we shall get a combinatorial description of free objects in such classes (varieties) of vector valued semigroups.

This is a joint work with D. DIMOVSKI (Ss. Cyril and Methodius University, Skopje).

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