Left restriction semigroups from incomplete automata

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Abstract

The aim of this talk is to introduce the left restriction semigroup $PAS(X)$ of all partial automaton transformations over a finite alphabet X and characterise it in terms of wreath product. We show that $PAS(X)$ is isomorphic to the infinitely iterated wreath product of the partial transformation semigroups $\mathcal{PT}(X)$ of X. Such a result generalises Olijnyk, Sushchansky and Slupik's result of the inverse semigroup of all partial automaton permutations over a finite alphabet X.

References

[1] A. S. Olijnyk, V. I. Sushchansky and J. K. Slupik, 'Inverse semigroups of partial automaton permutations', *International Journal of Algebra and Computation* **20** (2010), 923-952.