

# Universality of the lattice of transformation monoids

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The set of all transformation monoids on a fixed set of infinite cardinality  $\lambda$ , equipped with the order of inclusion, forms a complete algebraic lattice  $\text{Mon}(\lambda)$  with  $2^\lambda$  compact elements. We show that this lattice is universal with respect to closed sublattices, i.e., the closed sublattices of  $\text{Mon}(\lambda)$  are, up to isomorphism, precisely the complete algebraic lattices with at most  $2^\lambda$  compact elements.

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