



Inverse semigroups determined by their partial automorphism monoids

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The partial automorphism monoid of an inverse semigroup is an inverse monoid consisting of all isomorphisms between its inverse subsemigroups. We prove that a tightly connected fundamental inverse semigroup S with no isolated nontrivial subgroups is lattice determined "modulo semilattices" and if T is an inverse semigroup whose partial automorphism monoid is isomorphic to that of S , then either S and T are isomorphic or they are dually isomorphic chains relative to the natural partial order; a similar result holds if T is any semigroup and the inverse monoids consisting of all isomorphisms between subsemigroups of S and T , respectively, are isomorphic. Moreover, for these results to hold, the conditions that S be tightly connected and have no isolated nontrivial subgroups are essential.

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