1154-20-841 **Michael Kinyon*** (`mkinyon@du.edu`), Department of Mathematics, 2390 S York St, University of Denver, Denver, CO 80208. *Conjugacy and the center of inverse monoids.*

In an inverse monoid S, there is a naive notion of what it means for two elements a, b to be conjugate: there exists $g \in S$ such that $b = g^{-1}ag$ and $a = gbg^{-1}$. This notion reveals more structure than at first meets the eye. For each $g \in G$, the (well-defined) map $\phi_g : gSg^{-1} \to g^{-1}Sg; a \mapsto g^{-1}ag$ turns out to be an *inner partial automorphism* of S. The mapping $\Phi : S \to \mathrm{Inn}(S); g \mapsto \phi_g$ from S to the *inner partial automorphism monoid* of S is a surjective homomorphism. The kernel of Φ is the *central congruence* of S and the corresponding normal inverse subsemigroup is $Z(S) = \{a \in S \mid axa^{-1}a = aa^{-1}xa\,,\ \forall x \in S\}$, the (true) *center* of S.

In this talk, I'll elaborate on this and also discuss the connection with marginal inverse subsemigroups and how this is all generalized beyond inverse semigroups. This is joint work with David Stanovský (Charles Univ. Prague) and the generalizations (if I get to them) are joint work with João Araújo (Nova Univ. Lisbon), Janusz Konieczny (Mary Washington College) and António Malheiro (Nova Univ. Lisbon). (Received September 11, 2019)