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Right ideal Howson semigroups and coherency

We define a semigroup S to be right ideal Howson if the intersection of any two finitely generated right ideals, or, equivalently, any two principal right ideals, is again finitely generated. This notion is the Howson property for S regarded as a right S-act over itself, hence the name. It is very closely connected to that of being finitely right aligned, and coincides with it for semigroups with local right identities.

Without assuming any specialist background, this talk will introduce right ideal Howson semigroups, explain why we are interested in them, and how they are related to other finitary properties for semigroups and monoids, such as that of being right coherent. Right ideal Howson semigroups abound, many examples coming with the stronger (and useful!) property that the intersection of principal right ideals is again principal. For any natural number n we give a presentation of a right ideal Howson semigroup possessing an intersection of principal right ideals that requires exactly n generators that is, in a particular sense, universal. We give analogous presentations for commutative, and for commutative cancellative, right ideal Howson semigroups.

This is joint work with Scott Carson.