C*-algebras generated by semigroups of partial isometries

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Nica introduced a class of partially ordered groups called quasi-lattice ordered groups and studied the C*-algebras generated by semigroups of isometries satisfying a covariance condition. We discuss a revision of Nica’s construction for semigroups of partial isometries associated to doubly quasi-lattice ordered groups.

For each doubly quasi-lattice ordered group we construct a universal algebra generated by a covariant family of partial isometries. We consider an analogue of the regular representation constructed using a family of truncated shifts and investigate when the corresponding representation of the universal algebra is faithful. This gives rise to a notion of amenability for doubly quasi-lattice ordered groups.

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