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*Regularity properties of Cuntz-Pimsner algebras*

Let  $\mathcal{H}$  be a finitely generated  $C^*$ -correspondence over the  $C(X)$ , where  $X$  is an infinite compact, metrizable space. We can associate to  $\mathcal{H}$  the Cuntz-Pimsner algebra  $\mathcal{O}(\mathcal{H})$ , which is a generalization of both Cuntz-Krieger algebras and crossed products by  $\mathbb{Z}$ . It is a result of Schweizer that when the  $C^*$ -correspondence is full, nonperiodic, and minimal, the  $C^*$ -algebra  $\mathcal{O}(\mathcal{H})$  is simple and unital.

In the case of crossed products by minimal homeomorphisms, the orbit breaking subalgebra, defined by Putnam, is a large subalgebra of  $C(X) \rtimes_{\alpha} \mathbb{Z}$ , in the sense of N. C. Phillips. We show that the Cuntz-Pimsner algebra  $\mathcal{O}(\mathcal{H})$  also contains a large subalgebra, at least for a large class of  $C^*$ -correspondences. We will discuss some properties that  $\mathcal{O}(\mathcal{H})$  and/or its large subalgebra have, focusing on properties needed for classification. In particular, we will describe in details the case where the  $C^*$ -correspondence is a line bundle, with left multiplication given by a twist by a homeomorphism. This is joint work with M. S. Adamo, D. Archey, M. Forough, M. Georgescu, J. A. Jeong, and K. Strung.