KEN DAVIDSON, University of Waterloo

Semicrossed products of the disk algebra

If α is the endomorphism of the disk algebra, $\mathrm{A}(\mathbb{D})$, induced by composition with a finite Blaschke product b, then the semicrossed product $\mathrm{A}(\mathbb{D}) \times_\alpha \mathbb{Z}^+$ imbeds canonically, completely isometrically into $\mathrm{C}(\mathbb{T}) \times_\alpha \mathbb{Z}^+$. Hence in the case of a non-constant Blaschke product b, the C*-envelope has the form $\mathrm{C}(\mathcal{S}_b) \times_s \mathbb{Z}$, where $(\mathcal{S}_b, s)$ is the solenoid system for $(\mathbb{T}, b)$. In the case where b is a constant, then the C*-envelope of $\mathrm{A}(\mathbb{D}) \times_\alpha \mathbb{Z}^+$ is strongly Morita equivalent to a crossed product of the form $\mathrm{C}(\mathcal{S}_e) \times_s \mathbb{Z}$, where $e\colon \mathbb{T} \times \mathbb{Z}^+ \longrightarrow \mathbb{T} \times \mathbb{Z}^+$ is a suitable map and $(\mathcal{S}_e, s)$ is the solenoid system for $(\mathbb{T} \times \mathbb{Z}^+,\, e)$.