

On Coherent Terwilliger Algebras and Wreath Products

Misha Muzychuk

Netanya Academic College

`misha.muzychuk@gmail.com`

Bangteng Xu

Eastern Kentucky University

`bangteng.xu@eku.edu`

Let $\mathcal{A} \subseteq M_\Omega[\mathbb{F}]$ be a coherent algebra. Its Terwilliger algebra $\mathcal{T}_\omega(\mathcal{A})$ is called *coherent* if \mathcal{T}_ω is closed with respect to Schur-Hadamard product. In our talk we'll present some properties of coherent Terwilliger algebra.

We also present a theorem which provides a complete description of T-algebra of a wreath product of association schemes. Using this result we prove that if both factors of the wreath product have coherent T-algebras, then the wreath product has a coherent T-algebra too.