

Reflection positive representations - the case of the integers \mathbb{Z} and the real line \mathbb{R}

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Reflection positivity, also known as Osterwalder–Schrader positivity in Constructive QFT, plays a significant role in the representation theory for Lie groups.

In this talk, our focus is on the reflection positive representations of the triples $(\mathbb{Z}, \mathbb{N}, -\text{id}_{\mathbb{Z}})$ and $(\mathbb{R}, \mathbb{R}_+, -\text{id}_{\mathbb{R}})$. We will present our new approach based on Hankel operators and representations, discussing our results on how positive Hankel representations give rise to reflection positive representations in the multiplicity free case.

The talk is based on joint work with K.-H. Neeb and J. Schober.