

Reflection positive representations and Hankel operators in the multiplicity free case

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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, we will mainly consider 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 study such representations using Hankel operators and representations. In particular, we will look at 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.