A groupoid approach to star-exponentials of the quadratic form in one complex variable

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Abstract

We present a distinct point of view on the work of OMMY (Omori, Maeda, Miyazaki and Yoshioka) about star-exponential functions of the quadratic form in one complex variable. We construct a Lie groupoid which encodes all local and global information regarding the star-exponential functions of the quadratic form and their intertwiners. In contrast to OMMY's "two-valued blurred Lie group" interpretation, our groupoid approach allows for consistently following the sign choices for the values of these star-exponential functions.