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Roland Knevel* (knevelr@macs.biu.ac.il), Bar-Ilan University, Department of Mathematics, 52900 Ramat Gan, Israel. *Krein spaces and local deformation in representation theory of super Lie groups.*

Using the example of the super Heisenberg groups I will show how indefinit invariant sesquilinear forms and local deformations of unitary representations naturally enter the picture when constructing an injective Fourier transform from the L^2 -functions on a super Lie group to the ones on its unitary dual. However, both concepts have to be defined properly. I will discuss the possibilities of a precise definition and the survival of classical results in these cases. (Received September 18, 2011)