

# Modular shadows and the Lévy-Mellin transform

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## **Abstract**

I will explain some recent developments concerning the structure of the “invisible boundary” of the modular tower for  $SL(2)$ . I will start with a formalism of pseudo-measures generalizing the well-known theory of modular symbols for  $SL(2)$ . These pseudo-measures, and the related integral formula which I call the Lévy-Mellin transform, can be considered as an “ $\infty$ -adic” version of Mazur’s  $p$ -adic measures that have been introduced in the seventies in the theory of  $p$ -adic interpolation of the Mellin transforms of cusp forms. Finally, a formalism of iterated Lévy-Mellin transform will be sketched.