

## Abstract

We investigate periods, quasi-periods, logarithms, and quasi-logarithms of Anderson  $t$ -modules, as well as their hyperderivatives. We develop a comprehensive account of how these values can be obtained through rigid analytic trivializations of abelian and  $\mathbf{A}$ -finite  $t$ -modules. To do this we build on the exponentiation theorem of Anderson and investigate quasi-periodic extensions of  $t$ -modules through Anderson generating functions. By applying these results to prolongation  $t$ -modules of Maurischat, we integrate hyperderivatives of these values together with previous work of Brownawell and Denis in this framework.