

On formal Fourier–Jacobi expansions, revisited

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In our talk, we will revisit the main result of [1], stating that formal Fourier–Jacobi expansions satisfying a natural symmetry condition give rise to Siegel modular forms in case of genus $g > 1$. While the proof given in [1] is carried out in the analytic category, our approach is based on the theory of arithmetic compactifications [2] of the moduli space of abelian schemes of dimension g . In particular, this allows to generalize the results of [1] to the arithmetic setting.

References

- [1] J. H. Bruinier and M. Westerholt-Raum, Kudla’s modularity conjecture and formal Fourier–Jacobi series, *Forum of Mathematics, Pi* **3** (2015), 30 pages.
- [2] G. Faltings and C.-L. Chai, Degeneration of abelian varieties, *Ergebnisse der Mathematik und ihrer Grenzgebiete (3)*, vol. 22, Springer-Verlag, Berlin, 1990.