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Period geometry of Calabi-Yau n-folds for Feynman integrals

Monday, 20 March 2023 11:00 (1 hour)

This introduction aims at the pragmatic understanding of those differential and analytic properties of periods – and chain integrals on Calabi-Yau n-folds that facilitate the evaluation of parametric higher loop Feynman integrals. In particular we exhibit the application of the Riemann bilinear relations, the Griffiths transversality, the Griffith reduction method, the Gauss Manin connection of GKZ systems as well as some aspects of mixed Hodge Structures and monodromy properties to the evaluation of simple classes of parametric higher loop Feynman integrals and amplitudes.

Presenter: KLEMM, Albrecht