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Claire de Korte
“Constraining conformal correlators”

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Constraining Conformal Correlators

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We proved this using:

* Weyl's fundamental theorem of invariants
* Rosenlicht's theorem

This can be used, alongside the other constraints, to justify that all n-point conformal correlators are of the form:

$$G_{\underline{S},\underline{\Delta}}(z_1,p_1,\dots,z_n,p_n) = \left[\prod_{i<j} P_{ij}^{-c_{ij}}\right] A(\underline{u}, H_{ij}, V_{ij})$$

c_{ij} : $\frac{(\Delta_i+\Delta_j+\underline{S_i+S_j})}{n-2} - \frac{1}{(n-1)(n-2)}\sum_{i=1}^{n}(\Delta_i+S_i)$

Polynomial in the H_{ij} and V_{ij}, whose coefficients are arbitrary functions of the cross ratios $\underline{u}$

$$u_{ijkl} := \frac{P_{ij}P_{kl}}{P_{ik}P_{jl}}$$