Genuinely 4-dimensional Type II/Heterotic Dualities

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Abstract

In this talk, I will discuss genuinely four-dimensional instances of type II/heterotic duality. The heterotic models arise as weakly coupled dual descriptions of type II_0 loci in the vector multiplet moduli space of Calabi–Yau compactifications of type IIB string theory and do not have a higher-dimensional origin. By identifying the heterotic bundle and NS5-brane data, I will show that these models match not only the vector multiplet data but also the hypermultiplet moduli of the dual type IIB compactifications. I will also comment on the key features that distinguish these genuinely four-dimensional duality pairs from type II/heterotic dualities with a higher-dimensional origin. This talk is based on work in progress with Christian Aoufia and Max Wiesner.

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