

# Automated Systematic Generation of Flat Directions in Free Fermionic Heterotic Strings

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## Abstract content

It has been shown that string moduli are not completely stabilized in traditional weakly coupled free fermionic heterotic string flat direction phenomenology. This necessitates systematic investigation of VEV moduli space in order to compare with reality. We summarize the efforts at Baylor University to enhance the efficiency and depth of the current systematic free fermionic heterotic string investigations to include the calculation of flat direction derived phenomenological properties through supercomputing. We focus on the necessary assumptions, complexity and open questions that arise while making a fully-automated flat direction analysis program.

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