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Neural Network Approximations for Calabi-Yau Metrics

Thursday 15 July 2021 10:00 (30 minutes)

Ricci flat metrics for Calabi-Yau threefolds are not known analytically. We employ techniques from machine learning to determine numerical flat metrics for the Fermat and Dwork quintics. Measures that assess the Ricci flatness of the geometry decrease after training. Discrete symmetries of manifolds can be learned in the process of learning the metric.

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