



STRUCTURES
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**MATHEMATICAL
INSTITUTE**



**UNIVERSITÄT
HEIDELBERG**
ZUKUNFT
SEIT 1386

STRUCTURES Seminar

Pierrick Bousseau (ETH Zürich)

Quasimodular forms from Betti numbers

Abstract

This talk will be about refined curve counting on local \mathbb{P}^2 , the noncompact Calabi-Yau 3-fold total space of the canonical line bundle of the projective plane. I will explain how to construct quasimodular forms starting from Betti numbers of moduli spaces of one-dimensional coherent sheaves on \mathbb{P}^2 . This gives a proof of some stringy predictions about the refined topological string theory of local \mathbb{P}^2 in the Nekrasov-Shatashvili limit. Partly based on work in progress with Honglu Fan, Shuai Guo, and Longting Wu.

Time and venue

Monday, the 13th of January 2020, at 14h00 (s.t.) in INF 205/ SR 3.

Contact information

Physical Mathematics Hauptseminar webpage:

<https://www.mathi.uni-heidelberg.de/walcher/environment/phymath/?lang=en>

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