



TEDU MATH SEMINARS

The slope inequality for Lefschetz fibrations

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Abstract:

The theory of Lefschetz fibrations is a tool to understand the topology of symplectic 4 –manifolds via positive factorizations in mapping class group. The slope λ_f of a Lefschetz fibration is a numerical invariant which is determined by the Euler characteristic and the signature. Hain conjectured that every relatively minimal genus- g Lefschetz fibration $f: X \rightarrow \mathbb{S}^2$ satisfies the slope inequality $\lambda_f \geq 4 - 4/\lambda$.

Recently, Naoyuki Monden constructed Lefschetz fibrations over the two-sphere which do not satisfy the slope inequality. In this talk, I will establish new examples of Lefschetz fibrations having slope less than the ones that Monden constructed.

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TIME: 16:00

PLACE: TED University, A216