

BOSTON UNIVERSITY NUMBER THEORY SEMINAR

On categories of (φ, Γ) -modules

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Monday, Sept 21 at 4:15 pm

111 Cummington Street, MCS B21

Tea and cookies in MCS 144 at 4:00 pm

Abstract: In p -adic Hodge theory, one studies the category of continuous representations of p -adic Galois groups on p -adic vector space by embedding this category into a larger category of (φ, Γ) -modules. The original description of this category makes rather explicit use of the p -cyclotomic tower; in light of recent developments, it is natural to ask to what extent the category can be described in terms of perfectoid fields. The answer turns out to be better than it first appears!