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İSTANBUL NUMBER THEORY MEETINGS

VARIETIES DETERMINED BY THEIR ÉTALE FUNDAMENTAL GROUPS

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Abstract

We will give an elementary introduction to the theory and computation of étale fundamental groups. We will then be able to discuss anabelian varieties, a class of algebraic varieties introduced by A. Grothendieck, that are so rich in structure that they are determined by their étale fundamental groups. Grothendieck conjectured that an arithmetic Galois action was necessary for varieties to be anabelian. In the early 1990s, however, F. Bogomolov had the insight that in dimension ≥ 2 anabelian phenomena can be exhibited in the absence of this action. F. Pop made an even more precise conjecture, and we discuss the proof of this conjecture by Bogomolov-Y. Tschinkel, Pop, and finally Silberstein.

Date : Saturday, December 22, 2012

Time: 14:00

Place: IMBM Seminar Room, Boğaziçi University South Campus