Algebra
Seminar

Local-global principles for reductive groups over finitely generated fields

Igor Rapinchuk
Michigan State University

Abstract: One of the major results in the arithmetic theory of algebraic groups is the validity of the cohomological local-global (or Hasse) principle for simply-connected and adjoint semisimple groups over number fields. Over the last several years, there has been growing interest in studying Hasse principles for reductive groups over arbitrary finitely generated fields with respect to suitable sets of discrete valuations. In particular, we have conjectured that for divisorial sets, the corresponding Tate-Shafarevich set, which measures the deviation from the local-global principle, should be finite for all reductive groups. I will report on recent progress on this conjecture, focusing in particular on the case of algebraic tori as well as on connections to groups with good reduction. This talk is based on joint work with V. Chernousov and A. Rapinchuk.

Tuesday, October 3, 2023, 4:00 pm
Mathematics and Science Center: MSC N302

Mathematics
Emory University