המחלקה למתמטיקה, בן-גוריון

גאומטריה אלגברית ותורת המספרים

ביום רביעי, 13 במאי, 2015

בשעה *15:00 – 16:30*

ב*Math 201*

ההרצאה

and equations dffierential of solutions Counting consequences diophantine

תינתן על-ידי

Toronto) of (University Binyamini Gal

תקציר: We consider the following problem: given a set of algebraic conditions on an n-tuple of functions and their first l derivatives, admitting finitely many solutions (in a dffierentiably closed field), one can give an upper bound for the number of solutions? I will present estimates in terms of the degrees of the algebraic conditions, or more generally the volumes of their Newton polytopes (analogous to the Bezout and BKK theorems). The estimates are singly-exponential with respect to n,l and have the natural asymptotic with respect to the degrees or Newton polytopes, sharpening previous doubly-exponential estimates due to Hrushovski and Pillay. No familiarity with dffierential algebra will be assumed. As an application, I will sketch how this result can be applied to deduce similar estimates for the number of transcendental lattice points on algebraic subvarieties

time If Pillay. and Hrushovski following varieties, abelian and tori complex of intersections of number the counting to application an mention also will I permits Freitag following varieties, algebraic and curves elliptic of classes isogeny between Scanlon. and

אנא שימו לב לשינוי בשעה ומקום!