Diagonal forms over quadratic extensions of $\mathbb{Q}_2$

By BRUNO DE PAULA MIRANDA (Valparaíso de Goiás),
HEMAR GODINHO (Brasília) and MICHAEL P. KNAPP (Baltimore)

Abstract. In 1920, Emil Artin conjectured: Let K be a field complete with respect to a discrete absolute value, with finite residue field. Then every homogeneous form with coefficients in K and degree d with at least $d^2 + 1$ variables admits a non-trivial zero. In this article, we prove the conjecture for diagonal forms of degree d not power of 2 over any quadratic extension of $\mathbb{Q}_2$.

BRUNO DE PAULA MIRANDA
INSTITUTO FEDERAL DE EDUCAÇÃO
CIÊNCIA E TECNOLOGIA DE GOIÁS
AVENIDA SAIA VELHA, KM 6, BR-040, S/N
PARQUE ESPLANADA V
VALPARAÍSO DE GOIÁS, GO 72876-601
BRAZIL

HEMAR GODINHO
DEPARTAMENTO DE MATEMÁTICA
UNIVERSIDADE DE BRASÍLIA
BRASÍLIA, DF 70910-900
BRAZIL

MICHAEL P. KNAPP
DEPARTMENT OF MATHEMATICS
AND STATISTICS
LOYOLA UNIVERSITY MARYLAND
4501 N. CHARLES ST.
BALTIMORE, MD 21210-2699
USA