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**Patrick Gerald Brosnan\*** ([brosnan@math.ubc.ca](mailto:brosnan@math.ubc.ca)), 1984 Mathematics Road, Vancouver, BC  
V6T 0A2, Canada. *Essential dimension and abelian varieties*. Preliminary report.

In a joint paper with R. Sreekantan, I used a number theoretical result coupled with a result of M. Florence to show that abelian varieties over number fields have infinite essential dimension. In this talk, I will prove that abelian varieties have infinite essential dimension over a much more general class of fields including all p-adic fields. The proof uses the results of Karpenko and Merkurjev on essential dimension of p-groups. (Received February 09, 2009)