Title: A problem related to the descent for quadratic forms

Abstract: Let F be a field of characteristic not 2, and q a quadratic form over F. Let $\mathrm{Im}(q)$ be the image of the natural homomorphism of Witt rings $W(F) \longrightarrow W(F(q))$, where $F(q)$ is the function field of the affine quadric given by q. In this talk, we are interested in indecomposable quadratic forms in $\mathrm{Im}(q)$, i.e., quadratic forms which are not isometric to a sum of two nonzero forms of $\mathrm{Im}(q)$. More precisely, we will focus on indecomposable forms of minimal dimension, which we describe for q of dimension less or equal to 8. In most cases, we prove that there exists a unique (up to a scalar in F) indecomposable form of minimal dimension related to the anisotropic part of q over $F(q)$. Our results are based on the descent problems for quadratic forms introduced and studied previously by Bruno Kahn and myself.