

Meeting: 1005, Newark, Delaware, SS 9A, Special Session on Arithmetic Groups and Related Topics

1005-20-25 **Igor V. Erovenko*** (igor@uncg.edu), Department of Mathematical Sciences, UNCG, Greensboro, NC 27402, and **Andrei S. Rapinchuk** (asr3x@virginia.edu), Department of Mathematics, PO Box 400137, University of Virginia, Charlottesville, VA 22904-4137. *Bounded generation of S -arithmetic subgroups of isotropic orthogonal groups over number fields.*

Let f be a nondegenerate quadratic form in $n \geq 5$ variables over a number field K and let S be a finite set of valuations of K containing all Archimedean ones. We prove that if the Witt index of f is ≥ 2 or it is 1 and S contains a non-Archimedean valuation, then the S -arithmetic subgroups of $\mathbf{SO}_n(f)$ have bounded generation. These groups provide a series of examples of boundedly generated S -arithmetic groups in isotropic, but not quasi-split, algebraic groups. (Received January 12, 2005)