

**MATHEMATICS AND STATISTICS  
SEMINAR ANNOUNCEMENT**

Thursday, October 22  
2:30 - 4:00 PM  
McLean Hall 201 Lounge

**SPEAKER**

Josnei Antonio Novacoski  
Advisor: Prof. Dr. Orlando Stanley Juriaans

**TITLE**

Classification of Algebraic Function Fields  
with Divisor Class Number two;

**ABSTRACT:**

Abstract : Following the Work of Le Brigand, D. we present a complete classification of all Algebraic Function Fields with Divisor Class number two. We show that, up to isomorphism, there exist 19 Algebraic Function Fields  $K$  having  $k$ , the finite field with  $q$  elements as full constant field. We show that in the quadratic case (where exist a  $x$  in  $K$ , such that  $[K : k(x)] = 2$ ) we have 11 A.F.F. and in the non-quadratic case we have 8 A.F.F. with Divisor Class Number equal Two. In the quadratic case we use the basic tools concerning Elliptic and Hyper-elliptic curves to present the classification and in the non-quadratic case we use basically the canonical imbedding of  $K/k$  in  $P^{(g-1)}(k)$ , the projective space of dimension  $g$ , where  $g$  is the genus of  $K/k$ .