

1086-11-2410

Jonathan Webster* (jwebste@butler.edu) and **Pieter Rozenhart.** *Exceptional Units in Cubic Function Fields.*

In this talk we study cubic function fields having exceptional units. We prove that the Galois fields are the immediate analogy of Shanks' simplest cubic number fields. We prove for certain models that a cube-free polynomial discriminant is sufficient to guarantee that a root is a fundamental unit. We conjecture this criteria is sufficient. An existence of a counter example relies on the existence of particular fundamental units of quadratic function fields. (Received September 25, 2012)