Speaker: Kenneth A. Ward

Title: Explicit Galois representations of automorphisms on holomorphic differentials in characteristic p

Abstract: We determine the representation of the Galois group for cyclotomic function fields in characteristic $p > 0$ induced by the natural action on the space of holomorphic differentials via construction of an explicit basis of differentials. This includes those cases which present wild ramification and finite automorphism groups with non-cyclic p-part, which have remained elusive. We also obtain information on the gap sequences of ramified primes. Finally, we extend these results to rank one Drinfeld modules.