

Time: Tuesday May 3rd, 2011 5:00pm

Location: Buchanan A202

### **Relating Discriminants of Global Fields**

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Constructing number fields with certain properties is a central problem in computational number theory. Next to the degree, the discriminant the best measure of the size and computational complexity of a number field. We will introduce a technique using characters and L-functions that relates the discriminants of cubic and quadratic fields. In fact, we will be able to show how this generalizes to a wide variety of fields with dihedral Galois group and how this can lead to field tabulation algorithms.