1154-VS-2094 **Chad Awtrey*** (cawtrey@elon.edu) and **Briana Brady**. *Automorphisms of 2-adic fields of degree twice an odd number.*

When we begin studying p-adic number fields, one of the first results we see is a formula for the number of nonisomorphic quadratic extensions. For example, we learn there is a unique unramified quadratic extension of the 2-adic numbers (defined by a quadratic polynomial that is irreducible mod 2) and six totally ramified extensions (these can be defined by Eisenstein polynomials), up to isomorphism. As with all quadratic extensions, each of these has exactly two automorphisms. In this talk, we generalize this situation. In particular, we show that if $n > 0$ is odd and K is any totally ramified extension of the 2-adic numbers of degree $2n$, then K has exactly two automorphisms. This result allows us to count isomorphism classes of totally ramified 2-adic fields of degree $2n$ by discriminant, which was not known previously. This in turn allows us to show easily that there are $2^{n+2} - 2$ such classes, which, while probably not well known, can be deduced from recent work of M. Monge (2011). Moreover, our result also allows us to develop canonical Eisenstein polynomials defining each class, extending previous work which has produced defining polynomials for cases $n \leq 11$. (Received September 17, 2019)