1125-22-1581 **Andrew Zimmer*** (aazimmer@uchicago.edu). *(unmarked) Length spectrum rigidity of representations.*

The (unmarked) length spectrum of a hyperbolic surface S is the sequence of the lengths of all non-oriented primitive curves on S arranged in ascending order. A construction of Sunada implies that the length spectrum does not determine the surface: there exists non-isometric closed Riemann surfaces with the same length spectrum. However, a theorem of Wolpert says that a generic closed Riemann surface is determined up to isometry by its length spectrum. In this talk I will describe how Wolpert's result generalizes to convex real projective structures on closed surfaces and more generally to representation varieties of finitely generated groups. This is joint work with Thomas Barthelmé and Ludovic Marquis. (Received September 18, 2016)