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**Caleb McKinley Shor\*** ([cshor@wne.edu](mailto:cshor@wne.edu)), Box H-5156, Department of Mathematics, Western New England University, 1215 Wilbraham Rd, Springfield, MA 01119. *On 2-Weierstrass points of genus 3 hyperelliptic curves with extra automorphisms.*

In this talk, we focus on genus 3 hyperelliptic curves with extra automorphisms and classify their 2-Weierstrass points. Such families of curves are explicitly determined in terms of a coordinate in the hyperelliptic moduli  $\mathcal{H}_3$ . While our primary tool for calculating the 2-Weierstrass points is the Wronskian, we will also discuss a method to calculate  $q$ -Weierstrass points of general genus  $g$  hyperelliptic curves using Taylor polynomials. (Received September 16, 2013)