1137-11-5 **Ken Ono*** (ono@mathcs.emory.edu), Dept Math and Computer Science, Emory University, 400 Dowman Drive, Atlanta, GA 30317. *Recent Results on the Riemann Hypotheses.*

This lecture will survey recent work on two of the Riemann Hypotheses. Following the theme of the special session, the speaker will discuss period polynomials of classical modular forms, which are examples of quantum modular forms. Together with Jin, Ma, and Soundararajan, the speaker has proved the RH for the period polynomials of newforms. On the original Riemann Hypothesis for the Riemann zeta-function, the author has recent work with Griffin, Rolen, and Zagier which revisits the Jensen-Polya program designed to attack RH. This approach relies on establishing the hyperbolicity of Jensen polynomials for the derivatives of the Riemann Xi-function. Previous work established this hyperbolicity for degrees ¡4. Here we address the case of all degrees, and we prove that 100% of these polynomials for each degree are hyperbolic. Ruling out the possible exceptions would imply the full RH. (Received October 23, 2017)