

1145-11-52

Allison Arnold-Roksandich* (arnoldra@oregonstate.edu). *Establishing Several Infinite Families of Quantum Modular and Mock Modular Forms.*

In 2013, Lemke Oliver created a list of all eta-quotients which are theta functions. Then in 2016, Folsom, Garthwaite, Kang, Swisher, and Treneer utilized this list of “eta-theta” functions along with Zwegers’s construction of mock theta functions to create a set of mock modular forms which are also quantum modular forms. Later in 2016, Diaz, Ellefsen, and Swisher generalized a subset of these quantum modular forms to a single general form of quantum modular forms which included the every element of this subset. This talk will discuss the work done to extend this generalization to a larger general form which encompasses all functions made by Folsom et al. as well as showing that all of these generalized quantum modular forms are also mock modular forms. (Received July 08, 2018)