

1163-11-1001      **Brandon Boggess** (bboggess@math.wisc.edu) and **Soumya Sankar\*** (ssankar@msri.org).  
*Counting rational points on stacks.*

The presence of non-trivial cohomology can often be used to construct obstructions to the representability of moduli problems. In particular, some very nice moduli spaces are stacks instead of schemes. A classical example of this is the moduli stack of elliptic curves with an  $N$ -isogeny. In this talk, I will describe how this poses a problem when attempting to count rational points on this moduli space and talk about some ways to overcome this problem. I will discuss joint work with Brandon Boggess, where we use these methods to answer the following classical question for certain  $N$ : how many elliptic curves of bounded naive height have a rational  $N$ -isogeny? (Received September 14, 2020)