

1106-11-1541 **Wen-Ching Winnie Li*** (wli@math.psu.edu), Department of Mathematics, Penn State University, University Park, PA 16802. *Modular Forms for Congruence and Noncongruence Subgroups.*

The arithmetic of modular forms for congruence subgroups of $SL(2, \mathbb{Z})$ has been a central theme in number theory for over one century. It has close connections with many branches of mathematics. Wiles's proof of Fermat's Last Theorem has brought the field to a new climax. The arithmetic of modular forms for noncongruence subgroups, on the other hand, has not attracted much attention in the past. However, the research in this area has been reinvigorated in the past decade.

This talk is an overview of the progress on modular forms for both congruence and noncongruence subgroups as well as the connections between these two kinds of forms. (Received September 14, 2014)