

1125-11-3001 **Zhu Cao*** (zcao@kennesaw.edu) and **Yong Hu**. *Exact covering systems, Quadratic forms, and product identities for theta functions.*

In this talk, we discuss the connections among exact covering systems, quadratic forms, and product identities for theta functions. We show that most of the identities among Ramanujan's forty identities for the Rogers-Ramanujan functions can be proved using ECS and QF. We also apply these ideas to obtain new identities for products of three or more theta functions. (Received September 20, 2016)