1125-11-1425 **Luca Candelori***, lcandelori@lsu.edu, and **Cameron Franc**. *Graded modules of vector-valued modular forms and directed graphs.*

Vector-valued modular forms are holomorphic functions on the upper half-plane taking values in complex representations of subgroups of the modular group, together with a certain 'weight' and growth conditions at the cusps. In this talk we study the structure of the graded modules of vector-valued modular forms, and discuss the question of when these modules are projective over the ring of classical modular forms. We also describe the correspondence between modules of vector-valued modular forms and representations of certain quivers (i.e. directed graphs), via tilting theory. (Received September 16, 2016)