November 12, 2014: Pham Tiep (University of Arizona and Harvard), *Representations and subgroup structure of simple groups.* 

What can one say about maximal subgroups, or, more generally, subgroup structure of simple, finite or algebraic, groups? In this talk we will discuss how group representation theory helps us study this classical problem. We will also describe applications of these results to various problems, particularly in number theory and algebraic geometry.