1127-05-118          **Nir Gadish\*** (`nirg@uchicago.edu`), 552 W. Aldine Ave. #1N, Chicago, IL 60657. *Categories of FI-type: a combinatorial structure underlying rep. stability.*

Following Church-Ellenberg-Farb's description of FI-modules and their representation stability, several generalizations were proposed by Wilson, Sam-Snowden, Gan-Li and others. The different examples share some combinatorial structure, which turns out to be sufficient for proving general representation stability results. This talk outlines a unifying approach to generalizing representation stability, via the theory of modules over so called 'categories of FI-type': we will see how simple combinatorial structures give rise to character polynomials with stabilizing inner products. (Received January 28, 2017)