1131-05-390 **Tom Braden** (`braden@math.umass.edu`), **Jacob P. Matherne*** (`matherne@math.umass.edu`) and **Nicholas Proudfoot** (`njp@uoregon.edu`). *Kazhdan–Lusztig polynomials of matroids.* Preliminary report.

Kazhdan–Lusztig polynomials for Coxeter groups were introduced in the 1970s, attracting a great deal of research in geometric representation theory, and providing deep relationships among representation theory, topology, and combinatorics. In 2016, Ben Elias, Nicholas Proudfoot, and Max Wakefield defined an analogous polynomial in the setting of matroids. In this talk, I will define these polynomials and give examples of them, including the case of matroids associated to braid arrangements. I will also discuss some recent joint work with Tom Braden and Nicholas Proudfoot concerning the structure of these polynomials and a conjectural definition of intersection cohomology for matroids. (Received July 18, 2017)