1167-05-159 **Qiyao Chen***, Changsha, Hunan Province, and **Yichao Chen** and **Jonathan Gross**. *Partial-twuality polynomials.* Preliminary report.

Chmutov generalized the geometric dual of a ribbon graph G by introducing partial-duality with respect to a subset of edges. The underlying idea has been extended by Ellis-Monaghan and Moffatt to partial-twuality of a ribbon graph G, where the geometric dual, the Petrie dual, the two trialities, and the Wilson dual are all referred to as "twuals". Each of these partial operators is defined with respect to a subset A of ribbons of the graph. Recently, Gross, Mansour and Tucker introduced the partial-twuality Euler-genus polynomial. In this talk, formulas for partial-twuality of G by Euler-genus are given. Then we obtain formulas for the maximum partial-triality genera and maximum partial-Wilson duality genus. Finally, some recursive expressions for calculating partial-Wilson dual (Euler-genus) polynomials are given. This is joint work with Yichao Chen and Jonathan L. Gross. (Received March 04, 2021)