

1106-05-616

**Cristina M Ballantine\*** (cballant@holycross.edu) and **Rosa C Orellana**  
(rosa.c.orellana@dartmouth.edu). *Schur-Positivity in a Square.*

Determining if a symmetric function is Schur-positive is a notoriously difficult problem. We study the Schur-positivity of a family of symmetric functions. Given a partition  $\nu$ , we denote by  $\nu^c$  its complement in a square partition ( $m^m$ ). We conjecture a Schur-positivity criterion for symmetric functions of the form  $s_{\mu'}s_{\mu^c} - s_{\nu'}s_{\nu^c}$ , where  $\nu$  is a partition of weight  $|\mu| - 1$  contained in  $\mu$  and the complement of  $\mu$  is taken in the same square partition as the complement of  $\nu$ . We prove the conjecture in many cases. (Received September 03, 2014)