Emmanuel Briand (ebriand@us.es), Rosa C Orellana* (rosa.c.orellana@dartmouth.edu) and Mercedes H. Rosas (mrosas@us.es). On the stability of the Kronecker product.

In the late 1930’s Murnaghan discovered the existence of a stabilization phenomenon for the Kronecker product of Schur functions. For n sufficiently large, the values of the Kronecker coefficients appearing in the product of two Schur functions of degree n do not depend on the first part of the indexing partitions, but only on the values of their remaining parts. We compute the exact value of n for which all the coefficients of a Kronecker product of Schur functions stabilize. We also compute two new bounds for the stabilization of a sequence of coefficients and show that they improve existing bounds of M. Brion and E. Vallejo. (Received August 24, 2009)