

1112-05-615

Mike Zabrocki*, Mike Zabrocki, York Univeristy, Mathematics and Statistics, Toronto, ON M3J1P3, Canada, and **Rosa Orellana**. *On symmetric group and partition algebra characters*. Preliminary report.

When Gl_n acts with the natural action on the k -fold tensor product of an n -dimensional representation, the centralizer algebra is the symmetric group algebra on k -letters. In this case the Schur functions are the characters of the irreducible Gl_n representations. Analogously, if we consider the symmetric group on n letters acting on the k -fold tensor product of the permutation representation, then the partition algebra is the centralizer algebra of this action. We consider the basis of the symmetric functions which are the characters of the S_n representations. We show that the combinatorics of the change of basis coefficients describe the decomposition of Gl_n modules into S_n modules and the structure coefficients are the Kronecker coefficients.

This is joint work with Rosa Orellana. (Received August 11, 2015)