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*A cocharge folklore and super coinvariant spaces*

It is well-known that the major index  $maj$  and the cocharge statistics  $chr$  of standard tableaux are equidistributed. It is also well-known that  $maj$  and  $chr$  are related to bases of the classical coinvariant spaces. In this talk, we consider a generalization of the classic coinvariant spaces called the super coinvariant spaces. We motivate and discuss a folklore that refines the equidistribution of  $maj$  and  $chr$ . Finally, we discuss some open problems in super coinvariant spaces.