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Vasu Tewari* (vvtewari@math.upenn.edu) and **Philippe Nadeau**. *Divided symmetrization and the cohomology of the Peterson variety*. Preliminary report.

The procedure of divided symmetrization was introduced by A. Postnikov in the context of computing volume polynomials of various classes of permutahedra. This procedure takes a multivariate polynomial as input and outputs a scalar, which in many cases is a combinatorially interesting quantity.

In this talk, I will describe how performing divided symmetrization is equivalent to reducing multivariate polynomials modulo the ideal generated by the homogeneous quasi-symmetric polynomials of positive degree in a fixed number of variables. I will subsequently discuss how divided symmetrization can be used to understand the Schubert expansion of the cohomology class of the Peterson variety.

This is joint work with Philippe Nadeau. (Received August 30, 2019)