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**Harry Tamvakis\*** ([harryt@math.umd.edu](mailto:harryt@math.umd.edu)). *Theta polynomials and the cohomology of symplectic Grassmannians.*

The cohomology of the usual Grassmannian  $X$  has been studied for well over a century. The classes of the Schubert varieties form an additive basis for the cohomology ring of  $X$ , and Giambelli proved that the Schur  $S$ -polynomials serve as algebraic representatives of these classes. The corresponding objects which represent the Schubert classes on symplectic Grassmannians are called theta polynomials, and were introduced six years ago in joint work with Anders Buch and Andrew Kresch. These polynomials interpolate naturally between Jacobi-Trudi determinants and Schur Pfaffians, and have rich combinatorial and geometric properties. When coupled with the companion theory of eta polynomials, they are key ingredients in the solution of the Giambelli problem for the torus-equivariant cohomology of any classical  $G/P$  space. I will give a brief introduction to this theory, and discuss some open questions. (Received January 15, 2015)