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**Sami Assaf** ([shassaf@usc.edu](mailto:shassaf@usc.edu)), Department of Mathematics, University of Southern California, 3620 S Vermont Ave KAP 104, Los Angeles, CA 90089, and **Dominic Searles\*** ([dsearles@usc.edu](mailto:dsearles@usc.edu)), Department of Mathematics, University of Southern California, 3620 S Vermont Ave KAP 104, Los Angeles, CA 90089. *Schubert polynomials and slide polynomials.*

We introduce a new basis for the polynomial ring called the fundamental slide polynomials. Our aim is to better understand the geometrically-motivated basis of Schubert polynomials, whose structure constants count intersection points of triples of Schubert subvarieties of the complete flag variety. As is the case for the Schubert basis, the structure constants of the fundamental slide basis are nonnegative integers, and we give a nonnegative combinatorial rule for these numbers in terms of shuffles. Moreover, Schubert polynomials expand positively in the fundamental slide basis; we give a combinatorial rule for this expansion. We use these rules to obtain a more compact formula for the product of two Schubert polynomials, and to gain a refined understanding of stability of Schubert polynomials. (Received July 16, 2016)