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Michael D. Weiner* (mdw8@psu.edu), 3000 Ivyside Park, Altoona, PA 16601, and **Daniel Birmajer** and **Juan B. Gil**. *On factor-free Dyck words with half-integer slope.*

We study a class of rational Dyck paths with half-integer slope corresponding to factor-free Dyck words, as introduced by P. Duchon. We show that, for the slopes considered in this paper, the language of factor-free Dyck words is generated by an auxiliary language that we examine from the algebraic and combinatorial points of view. We provide a lattice path description of this language, and give an explicit enumeration formula in terms of partial Bell polynomials. As a corollary, we obtain new formulas for the number of associated factor-free generalized Dyck words. (Received September 18, 2018)