

1154-05-2157

Opel Jones* (ojones@towson.edu), Towson University, Department of Mathematics, 7800 York Road, Room 321, Towson, MD 21252. *Enumerations of Restricted Dumont Permutations.*

In 1974 Dumont found two types of permutations are counted the same sequence. The first type is a permutation in which each even entry is followed by a smaller entry, and each odd entry is followed by a larger entry, or ends the permutation. The second type is a permutation wherein if an entry is a deficiency, it must be even, and if an entry is an excedance or a fixed point, it must be odd. These are now known as Dumont permutations of the first and second kinds. There are two other types of permutations which are also counted by the same sequence, known as Dumont permutations of the third and fourth kinds. In this talk we will discuss several enumerations of restricted Dumont permutations, that is Dumont permutations avoiding certain patterns. We will also briefly discuss their proofs which involve methods using induction, block decomposition, Dyck paths, and generating functions. We will conclude with a conjecture that the patterns 2143 and 3421 are indeed Wilf-equivalent on Dumont permutations of the first kind. (Received September 17, 2019)