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Lara Pudwell* (lara.pudwell@valpo.edu), Department of Mathematics and Statistics, 1900 Chapel Drive, Valparaiso, IN 46383. *Ascent sequences avoiding 0021*.

Ascent sequences were introduced by Bousquet-Mélou et al. in connection with a variety of other combinatorial structures. In 2011, Duncan and Steingrímsson introduced pattern avoidance in ascent sequences. They conjectured that ascent sequences avoiding 0021 and those avoiding 1012 are both counted by the binomial convolution of the Catalan numbers. Later, Mansour and Shattuck proved the conjecture correct for 1012 avoiders. In this talk, we outline the proof that 0021-avoiding ascent sequences have the same enumeration. The proof uses generating trees to elucidate the structure of the sequences in question, but the generating tree structure does not directly lead to the correct enumeration. Rather, we experimentally conjecture an appropriate multivariate generating function that tracks several statistics on the ascent sequences, verify it satisfies the appropriate structure, and specialize to the desired univariate solution. This result completes the Wilf-classification of patterns of length 4 for ascent sequences. (Received August 01, 2014)