

# Algebra/Topology Seminar

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## BUMPLESS PIPE DREAMS MEET PUZZLES

Thursday, November 16, 2023

3:00 p.m. in BB-B012

ABSTRACT. In this talk, we will present a combinatorial rule for the product of two double Grothendieck polynomials in different secondary variables with separated descents. This rule generalizes the separated-descent puzzle rules by Knutson and Zinn–Justin, as well as the bumpless pipe dream by Weigandt. We have utilized the formula to partially confirm a positivity conjecture by Kirillov. If time permits, we will also discuss the proof behind the proof. This work is joint with Neil J.Y. Fan and Peter L. Guo.