

## Noncommutative Birational Rowmotion on Rectangles (Remote)

*Tuesday, 30 November 2021 14:00 (50 minutes)*

The operation of birational rowmotion on a finite poset has been a mainstay in dynamical algebraic combinatorics for the last 8 years.

Since 2015, it is known that for a rectangular poset of the form  $[p] \times [q]$ , this operation is periodic with period  $p+q$ . (This result, as has been observed by Max Glick, is equivalent to Zamolodchikov's periodicity conjecture in type AA, proved by Volkov.)

In this talk, I will outline a proof (joint work with Tom Roby) of a noncommutative generalization of this result. The generalization does not quite extend to the full generality one could hope for it covers noncommutative rings, but not semirings; however, the proof is novel and simpler than the original commutative one. Extending this to semirings and to other posets is work in progress.

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