

1163-13-886

**Karl Schwede\*** ([schwede@math.utah.edu](mailto:schwede@math.utah.edu)), Department of Mathematics, University of Utah, Salt Lake City, UT 84112, and **Bhargav Bhatt, Linqun Ma, Zsolt Patakfalvi, Kevin Tucker, Joe Waldron** and **Jakub Witaszek**. *Applications of commutative algebra to mixed characteristic birational geometry.*

This talk, aimed at a commutative algebra audience, will present some ongoing work on mixed characteristic birational algebraic geometry that uses the recent commutative algebra breakthroughs in mixed characteristic, such as the direct summand conjecture, existence of big Cohen-Macaulay algebras, and the fact that  $R^+$  is a big Cohen-Macaulay algebra in mixed characteristic. (Received September 13, 2020)