

## **Singular set of $q$ -numbers and quantum Kronecker fractions Geometric interpretations of Coxeter-Conway friezes**

Katie Waddle

Three-term relations of the form  $AB + CD = EF$  arise in multiple mathematical contexts, including the Ptolemy equation for a cyclic quadrilateral, Casey's theorem on bitangents, Penner's relation for lambda lengths, and Plücker's identity for the maximal minors of a  $2 \times 4$  matrix. This talk will provide historical context for these relations, explain how these different occurrences can be directly obtained from each other, and discuss a connection to cross-ratios.