**YIXIN CHEN**, Simon Fraser University
*Two-torsion in Brauer groups of hyperelliptic fibered surface*

The Brauer group encodes many important arithmetic propeties of a variety. One of them is the Brauer-Manin obstruction, which plays an important role in determining if surfaces have any rational points.

We will outline a technique that uses a hyperelliptic fibration on a surface to determine two-torsion elements in the Brauer group of a surface. Of particular note is that this technique can also find transcendental Brauer elements, which remain non-trivial upon extending the base field to its algebraic closure.