

ALGEBRA
SEMINAR

*Unramified Brauer classes on cyclic covers of the projective
plane*

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Abstract: Brauer groups on schemes have many applications, for example, giving obstructions to existence of rational points. After reviewing different ways of presenting Brauer groups of fields and schemes, we will give a method to exhibit p -torsion Brauer classes on a p -cyclic cover of the projective plane, branched over a smooth curve of degree divisible by d . This extends earlier work of van Geemen for degree 2 K3 surfaces. In the case $p=2$, our method gives all the 2-torsion classes, and is equivalent to another (more geometric) method of Catanese. This is joint work with Colin Ingalls, Ekin Ozman, and Bianca Viray.

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MATHEMATICS AND COMPUTER SCIENCE
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