



*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

On the unification of characteristic classes and a little blowup calculus

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Abstract

We review the unification of the Chern class, Todd class and L -class into a single class which encodes them all, and we show how to upgrade this class to include the Hirzebruch characteristic classes as well. Moreover, we show how formulas for Chern classes may be immediately promoted to formulas for this unified characteristic class, which we illustrate by giving a formula for how this class behaves under blowups. We conclude by presenting a formula for pushing forward powers of the exceptional divisor of a blowup, which together with the formula for blowing up the unified characteristic class yields a powerful tool for reducing integrals of the unified characteristic class of a blowup to integrals on the base of the blowup.

Date: November 23, 2012 (Friday)

Time: 4:30 – 5:30pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome