

# Characteristic Classes in Multivariable Calculus Classes

Thomas Banchoff

Brown University

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102 Bradley Hall, 4:00 pm  
(Tea 3:30 pm Math Lounge)

## Abstract

Some of the most appealing theorems in combinatorial topology already appear in multivariable calculus classes, although often in disguised forms. In this lecture we will visit the parity lemma, the winding number, non-embeddability of the Klein bottle, the critical point theorem, and the Whitney duality theorem, using computer graphics demonstrations from a 'paperless' Internet-based first course in multivariable calculus.