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Hieu D Nguyen* (nguyen@rowan.edu), Rowan University, Department of Mathematics, 201 Mullica Hill Rd, Glassboro, NJ 08028. *Discovering Bernoulli Number Identities via Euler-Maclaurin Summation*. Preliminary report.

In this talk I describe how interesting identities involving Bernoulli numbers can be generated from the Euler-Maclaurin Summation Formula. By applying the formula to Bernoulli polynomials and more generally to Appell sequences, we recover classical identities such as Euler's quadratic relation for Bernoulli numbers and discover new ones, including those involving hypergeometric (generalized) Bernoulli numbers. Students with only knowledge of first-year calculus can quickly set off on their own exploration for new identities. (Received September 01, 2008)