

MSRI–Evans Talk

Monday, 4:10–5:00pm, 60 Evans

April 10 **Albrecht Klem**, University of Wisconsin, Madison, MSRI
New Ideas in Topological String Theory

After reviewing the definition of cohomological string theory we discuss the applications of classical mirror symmetry and integrable structures to quantum cohomology and to the calculation of symplectic invariants. We will then focus on the physical implications of the emerging stringy geometry to old problems of quantum gravity. In particular to topology changing transitions and to the counting of the entropy of supersymmetric black holes. We finally discuss the wave function interpretation of the topological string partition function.