

Wai Ling Yee (University of Windsor) Title: Kazhdan-Lusztig polynomials and signature computations

Abstract: The Unitary Dual Problem is a difficult open problem in mathematics which has been open for more than 70 years. Today, this problem is most commonly studied in the setting of representations admitting invariant Hermitian forms (classified by Knapp and Zuckerman). The Unitary Dual Problem may then be reformulated as the problem of identifying which forms are positive definite by computing the signatures of the forms. In this talk, I will discuss the connection between this problem and module structure encoded by Kazhdan-Lusztig polynomials.