

Title: On Hermite diagonal operators
Speaker: Tamas Forgacs

Abstract: Any linear operator on $R[x]$ can be written as a formal power series in D^k with polynomial coefficient. In 2007 an appealing formula has been found for the coefficients of an operator which is diagonal with respect to the standard basis. In this talk we explore the coefficients of an operator which is diagonal with respect to the Hermite basis. We will present some results and describe how we arrived to the conjectured nice formula for these polynomials and how it is related to (a version of) Pascal's triangle. We will also describe some of the difficulties presenting themselves in the proof of this conjecture.