The Weyl algebra arises in many different settings in mathematics and physics. This talk will focus on a family of subalgebras of the Weyl algebra, which can be viewed as algebras of differential operators with polynomial coefficients. In our joint work, we have investigated the structure of these algebras and determined their irreducible representations. There are interesting (non-standard) connections with the lattice of partitions. (Received September 23, 2012)