

# INVARIANTS OF HYPERSURFACES AND COMPLETE INTERSECTIONS

MARK WALKER

ABSTRACT. Let  $f(x_0, \dots, x_n)$  be a power series in  $n + 1$  variables with complex coefficients, and consider the associated hypersurface ring  $R = \mathbb{C}[[x_0, \dots, x_n]]/(f)$ . The theory of MCM modules over such a ring  $R$  has a long and rich history, and remains an area of active research interest. My talk will focus on some recent developments that relate the theory of MCM modules over  $R$  to geometric and topological invariants of  $f$ . Time permitting I will also discuss some of the analogues for the more general case of a complete intersection.