1086-11-662 **Anna Haensch*** (ahaensch@wesleyan.edu), Dept. of Math and Computer Science, Science Tower 655, 265 Church St., Middletown, CT 06457. *On almost universal ternary inhomogeneous quadratic polynomials.*

A fundamental question in the study of integral quadratic forms is the representation problem which asks for an effective determination of the set of integers represented by a given quadratic form. A related and equally interesting problem is the representation of integers by inhomogeneous quadratic polynomials. An inhomogeneous quadratic polynomial is a sum of a quadratic form and a linear form; it is called *almost universal* if it represents all but finitely many positive integers. This talk gives a characterization of almost universal ternary inhomogeneous quadratic polynomials, given by

$$H(x) = \frac{1}{p^\alpha}[2B(\nu, x) + Q(x)],$$

where p is prime, $\alpha > 0$, Q is the quadratic map associated to a positive definite quadratic lattice N, and ν is a vector not in N. Imposing some mild arithmetic conditions, we will rely on the theory of quadratic lattices and primitive spinor exceptions to give a list of global conditions on ν and N, under which $H(x)$ is almost universal. In particular, we will present some examples of almost universal quadratic polynomials, given by mixed sums of squares and polygonal numbers. (Received September 10, 2012)