1171-13-154   **Janet Page*** (`jrpage@umich.edu`). *Extremal (hyper)surfaces in positive characteristic.*

What is the most singular possible (reduced) hypersurface in characteristic p > 0? One answer to this question comes from finding a lower bound on an invariant called the F-pure threshold of a polynomial in terms of its degree. In this talk, I'll introduce a new class of homogeneous polynomials which achieve this lower bound. Further, I will discuss some of their surprising algebraic and geometric properties, with a focus on the four variable case, i.e., the case where they define projective surfaces.

   This talk is based on joint work with Zhibek Kadyrsizova, Jennifer Kenkel, Jyoti Singh, Karen Smith, Adela Vraciu, and Emily Witt as well as more recent joint work with Anna Brosowsky, Tim Ryan, and Karen Smith. (Received August 09, 2021)