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Cyclic polynomials in two variables.

In this talk, I will give a characterization of polynomials in two complex variables that are cyclic with respect to the coordinate shifts acting on Dirichlet-type spaces in the bidisk, which include the Hardy space and the Dirichlet space of the bidisk. The cyclicity of a polynomial depends on both the size and nature of the zero set of the polynomial on the distinguished boundary. The techniques in the proof come from real analytic function theory, determinantal representations for stable polynomials, and harmonic analysis on curves. This talk is based on a paper that is joint with Greg Knese, Lukasz Kosinski, Conni Liaw, Daniel Seco, and Alan Sola. (Received September 09, 2014)