In 1992 Göran Björck and Ralf Fröberg completely characterized the solution set of cyclic-8. In 2001 Jean-Charles Faugère determined the solution set of cyclic-9 by computer algebra methods and Gröbner basis computation. In this talk, we present an algorithm based on theories and algorithms developed in numerical algebraic geometry as well as a novel idea that hybridizes symbolic and numerical techniques to derive exactly the defining polynomials of all prime ideals of positive dimension in primary decomposition of cyclic-12. (Received September 08, 2008)