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Vefa Goksel* (goksel@math.wisc.edu). *Misiurewicz polynomials and irreducibility.*

Let $f_{c,d}(x) = x^d + c \in \mathbb{C}[x]$. The c_0 values for which $f_{c_0,d}$ has a strictly pre-periodic finite critical orbit are called Misiurewicz points. Any Misiurewicz point lies in $\bar{\mathbb{Q}}$. Suppose that the Misiurewicz points $c_0, c_1 \in \bar{\mathbb{Q}}$ are such that the polynomials $f_{c_0,d}$ and $f_{c_1,d}$ have the same orbit type. One classical question is whether c_0 and c_1 need to be Galois conjugates or not. I will talk about some partial results I have recently obtained related to this question. (Received September 03, 2019)