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Suppose that K is a field complete with respect to a discrete valuation v and that the residue field of K has characteristic p . Let $f(z) \in K[z]$ be a separable polynomial of the form $z^d + c$. Given $a \in K$, we study the Galois groups and ramification groups of the extensions of K generated by the solutions to $f^n(z) = a$. The behaviour of these groups depends on the value of $v(c)$, and we find that it changes dramatically as $v(c)$ crosses a certain value. This is joint work with Jacqueline Anderson, Spencer Hamblen, and Bjorn Poonen.

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