

**Pommaret, Jean-François**

**Poles and zeroes of nonlinear control systems.** (English) Zbl 1265.93117  
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Summary: During the last ten years, the concepts of “poles” and “zeros” for linear control systems have been revisited by using modern commutative algebra and module theory as a powerful substitute for the theory of polynomial matrices. Very recently, these concepts have been extended to multidimensional linear control systems with constant coefficients. Our purpose is to use the methods of “algebraic analysis” in order to extend these concepts to the variable coefficients case and, as a byproduct, to the nonlinear situation. We also provide nontrivial explicit examples.

**MSC:**

[93B55](#) Pole and zero placement problems  
[93C10](#) Nonlinear systems in control theory  
[93B25](#) Algebraic methods

**Keywords:**

[pole](#); [zero](#); [nonlinear control system](#)

**Full Text:** [Link](#)

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