

# Michigan Math Club

Thursday at 4pm in the Commons

Free Pizza and Pop

## Polynomial Composition

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Abstract for 13 January 2011

I will discuss properties of the set of polynomials under the operation of functional composition,  $g(x) \circ h(x) := g(h(x))$ . Although this operation in some respects is much more complicated than multiplication – for instance,  $g \circ h \neq h \circ g$  for “most” choices of  $g$  and  $h$  – it turns out that many properties of polynomial multiplication have analogues for polynomial composition. I will present elementary proofs and give applications and generalizations.

