1116-VI-395 **Alexander Ma*** (ama@bowdoin.edu) and **Jamie Oliva** (jo248428@muhlenberg.edu). *On the images of Jordan polynomials evaluated over symmetric matrices.*

A long-standing open question posed by Lvov and Kaplansky asks whether the image of a multilinear polynomial over a field F forms a vector space when evaluated over the full matrix algebra $M_n(F)$. A natural variation of this question asks whether the image of a multilinear Jordan polynomial evaluated over a Jordan algebra forms a vector space, where a multilinear Jordan polynomial is a multilinear polynomial with respect to the non-associative Jordan operation. We will show that the image of any degree-three multilinear Jordan polynomial evaluated over the Jordan algebras of real and complex symmetric matrices forms a vector space. (Received August 30, 2015)