1112-26-668 **J. Marshall Ash** and **Stefan Catoiu*** (scatoiu@condor.depaul.edu), Department of Mathematics, 2320 N. Kenmore Avenue, Chicago, IL 60614. *Generalized Riemann Derivatives with Variable Coefficients.* Preliminary report.

Generalized nth Riemann derivatives of real functions f are defined by limits of the form $D_{\mathcal{A}}f(x) = \lim_{h\to 0} h^{-n} \sum_i A_i f(x + b_i h)$, where the data vector $\mathcal{A}$ of coefficients A_i and b_i is subject to the compatibility condition that $D_{\mathcal{A}}f(x) = f^{(n)}(x)$ whenever f is n times differentiable at x. Allowing the coefficients A_i to be functions of h gives rise to a larger class of generalized Riemann derivatives. I will discuss a few properties, examples, and questions regarding these derivatives. (Received August 11, 2015)