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**Gareth Speight\*** ([gareth.speight@uc.edu](mailto:gareth.speight@uc.edu)), Department of Mathematical Sciences, 4199 French Hall West, University of Cincinnati, Cincinnati, OH 45221. *A measure zero universal differentiability set in the Heisenberg Group.*

The Heisenberg group  $\mathbb{H}^n$  is a metric measure space equipped with translations and dilations. Lipschitz functions on  $\mathbb{H}^n$  are Pansu differentiable almost everywhere, but  $\mathbb{H}^n$  admits no bilipschitz embedding into a Euclidean space. We show there exists a measure zero ‘universal differentiability set’ in  $\mathbb{H}^n$  containing a point of Pansu differentiability for every real-valued Lipschitz function. The proof adapts techniques from Banach space theory, showing that existence of an ‘almost maximal’ directional derivative implies Pansu differentiability. Joint work with Andrea Pinamonti. (Received January 07, 2016)