1106-41-1394   **Stephen D. Casey*** (`scasey@american.edu`), Math/Stat Department, American University, 4400 Massachusetts Avenue, NW, Washington, DC 20016-8050. *Sampling Sets and Sets of Uniqueness in Both Euclidean and Non-Euclidean Domains.* Preliminary report.

Sampling theory is a fundamental area of study in harmonic analysis and signal and image processing. A fundamental component of the subject is the sampling set, a discrete set on which the information of a function can be uniquely determined and stably reconstructed. Thus, a sampling set is a set of uniqueness, a set on which the information of the function is uniquely encoded. However, there exist sets of uniqueness that are not sampling sets. Our talk focuses on a natural way to construct these sets in both Euclidean and non-Euclidean domains. This works builds upon the author's earlier work on the inverse convolution problem, and recent work on sampling in non-Euclidean domains. (Received September 12, 2014)