1163-42-127 **Theresa C Anderson*** (tcanderson@purdue.edu) and **Bingyang Hu**. *A classification of distinct dyadic systems.*

Distinct dyadic systems are ubiquitous in harmonic analysis and related fields as they allow one to decompose a continuous operator or object into a sum or intersection of (easier to handle) dyadic counterparts – as long as those counterparts form a distinct dyadic system. This topic had showed up in many places in the literature, and in joint work with Hu, Jiang, Olson, and Wu, we were able to completely classify these systems on the real line. With Hu, we were able to extend this work to Euclidean space. Both of these works are closely related (surprisingly?) to number theory, but in $\mathbb{R}^n$, certain interesting geometric structures also play a key role. (Received August 19, 2020)