A Characterization of Three-Interval Wavelet Sets in $\mathbb{R}$

Zachary Catlin, Purdue University

A wavelet set in $\mathbb{R}$ is a subset of $\mathbb{R}$ that is translation congruent modulo $2\pi$ to the set $[0, 2\pi)$ and dilation congruent modulo 2 to the set $[-2\pi, -\pi) \cup [\pi, 2\pi)$. In this talk, a characterization of wavelet sets of three intervals is presented. A short proof that there are uncountably many wavelet sets of four or more intervals is also given.