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*Fuglede's and generalized Fuglede's conjecture on  $\mathbb{R}^1$*

Fuglede's conjecture stated that translational tiles and spectral sets are equivalent. This conjecture was disproved by Tao, later by Kolountzakis and Matolcsi on  $\mathbb{R}^d$ ,  $d \geq 3$ . The conjecture now remained open when  $d = 1, 2$ . In this talk, we reviewed some recent work on Fuglede's conjecture on  $\mathbb{R}^1$  and proposed a generalized one which includes all fractal spectral measures.