1144-42-132 **Itay Londner***, itayl@math.ubc.ca. *Interpolation sets and arithmetic progressions.*

Given a set S of positive measure on the unit circle, a set of integers Λ is an interpolation set (IS) for S if for any data $\{c(\lambda)\}_{\lambda\in\Lambda}$ in $\ell^2(\Lambda)$, there exists a function $f \in L^2(S)$ such that its Fourier coefficients satisfy $\hat{f}(\lambda) = c(\lambda)$ for all $\lambda \in \Lambda$. In my talk I will discuss the relationship between the concept of IS and the existence of arbitrarily long arithmetic progressions with specified lengths and step sizes in Λ.

Multidimensional analogue and recent developments will also be considered.

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