1129-46-203 **Lyonell Boulton*** (l.boulton@hw.ac.uk), Department of Mathematics, Heriot-Watt University, Edinburgh, Scotland EH14 4AS, United Kingdom. *Computable criteria for Schauder bases of dilated periodic functions.*

We examine a computable criterion for determining whether families of dilated periodic functions form a Schauder basis of $L^r(0,1)$ for all $r > 1$. We illustrate the rich structure behind this problem, by applying this criterion to various families of functions. Two of these families are the p-sine and the p-cosine functions. For them we find improved thresholds $1 < p_1 < p_2 < \infty$, such that a Schauder basis is guaranteed for all $p \in [p_1, p_2]$. (Received March 15, 2017)