

# HARMONIC AND SPECTRAL ANALYSIS

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## **Tensor products of synthesizable modules and a question on varieties with spectral synthesis**

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Let  $V$  and  $W$  be synthesizable varieties for the (discrete) abelian groups  $G$  and  $H$ , respectively. We present a short proof of the fact that the variety  $V \otimes W$  is synthesizable. Whether the property of having spectral synthesis carries over is a much more complicated matter.

Let  $V$  be a variety for the discrete abelian group  $G$ , let  $M$  be a maximal ideal of  $\mathbb{C}G$  and  $n$  a natural number. If spectral synthesis holds on  $V$ , there is an absolute bound on the dimension of the indecomposable finite-dimensional submodules of  $V$  annihilated by  $M^n$ . Does the converse hold?