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*On the algebra generated by pure positive definite functions*

Let  $G$  be a locally compact group. In his doctoral thesis at Alberta, Y.-H. Cheng studied the closed subspace  $a_0(G)$ , spanned by pure continuous positive definite functions, in the Fourier-Stieltjes algebra  $B(G)$ . We let  $a(G)$  denote the closed algebra generated by  $a_0(G)$ . We show that  $a_0(G) \subsetneq a(G)$ , in general, by illustrating the examples of Heisenberg groups  $\mathbb{H}_n$  and  $\mathrm{SL}_2(\mathbb{R})$ . We show that  $a(\mathbb{H}_n)$  is contained in the spine  $A^*(\mathbb{H}_n)$  – an algebra defined by M. Ilie and the speaker – and is operator amenable. We also note that  $a(\mathrm{SL}_2(\mathbb{R}))$  is not operator weakly amenable though it admits no point derivations.

This represents joint work with Y.-H. Cheng and B.E. Forrest.