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Martin E Muldoon* (muldoon@yorku.ca), Department of Mathematics and Statistics, York University, Toronto, Ontario M3J 1P3, Canada. *Integral representations for products of some Sturm-Liouville functions.*

In the study of zeros of certain Sturm-Liouville functions, it is useful to have integral representations for products, sums of squares, and cross-products of such functions. Nicholson-type formulas for Bessel functions are the best-known examples. Here we revisit the question raised by the author, *Lect. Notes Math.* **1192** (1986), 155–160, of finding such representation by differential equations methods. Applications include Hermite (or parabolic cylinder) functions, as studied by Á. Elbert and the author, *Proc. Roy. Soc. Edinburgh* **A 129** (1999), 57–75. (Received August 04, 2008)