2001k:47071   47F05 47B25

Jorgensen, Palle E. T. (1-IA)**; Pedersen, Steen** (1-WRTS)
Commuting self-adjoint extensions of symmetric operators defined from the partial derivatives. (English. English summary)
J. Math. Phys. **41** (2000), *no.* 12, 8263–8278.

The authors study the problem of finding commuting selfadjoint extensions of the partial derivatives $\{-i(\partial/\partial x_j): \; j = 1, \ldots, d\}$ in $L_2(\Omega)$ (Ω is an open subset of R^d) [see, e.g., P. E. T. Jorgensen and S. Pedersen, J. Funct. Anal. 107 (1992), no. 1, 72–104; MR 93k:47005]. In this paper they give a representation-theoretic answer in the special case when $\Omega = I \times \Omega_2$ and I is an open interval. Then these results are applied to the case $\Omega = I^d$.   *Alexei Yu. Konstantinov* (UKR-KIEV)