



FIG. 6.3. CPU times for solving Laplace's equation in various cases using LAPACK/ATLAS (LP), FMM/GMRES (FMM), and recursive skeletonization (RS) as a function of the system size N . For LP and RS, the computation is split into two parts: precomputation (pc), for LP consisting of matrix formation and factorization, and for RS of matrix compression and factorization; and system solution (sv), consisting of matrix inverse application. The precision of the FMM and RS was set at $\epsilon = 10^{-9}$ in 2D and $\epsilon = 10^{-6}$ in 3D. Dotted lines indicate extrapolated data.