Simulations of magnetotransport in Hg-1201 SYLVIA LEWIN, JAMES ANALYTIS, University of California, Berkeley — The superconducting compounds HgBa$_2$Ca$_{n-1}$Cu$_n$O$_{2n+2+\delta}$ hold the distinction of having the highest transition temperatures at ambient pressure for a given number of CuO$_2$ layers (up to $n=3$). They also have a simple tetragonal structure and have relatively little structural distortion or chemical disorder in the CuO$_2$ planes compared to other high-temperature superconductors. The simplest of these structures is HgBa$_2$CuO$_{4+\delta}$ (Hg-1201), making it an attractive model system to study. I will share simulations of magnetotransport in Hg-1201 for a variety of possible Fermi surfaces, which should help to elucidate current data and guide future experiments on this material.