

962-81-777

**Stephen B Sontz\*** ([sontz@xanum.uam.mx](mailto:sontz@xanum.uam.mx)), Depto. de Matematicas, UAM-Iztapalapa, DF 09340 Mexico City, Mexico. *Recent results in Segal-Bargmann Analysis.*

The Segal-Bargmann (SB) transform, defined in the ground state representation, is analyzed for its mapping properties on the  $L^p$  scale of spaces. This is done in part by evaluating its Hille-Tamarkin norm. Interpolation theory is then used to prove analogues of the Hausdorff-Young inequality. These in turn lead to Hirschman type inequalities. A similar analysis is made of the integral kernel operator whose kernel is the reproducing kernel function of the SB space. While this leads to a new proof of a known result, namely a log-Sobolev inequality in the SB space, it also was the way that a reverse log-Sobolev inequality was first shown in the SB space. (Received September 25, 2000)