1000-53-119   **Brian C. Hall** and **Jeffrey J. Mitchell*** (`mitchellj@rmu.edu`), 6001 University Boulevard, Moon Township, PA 15108-1189. *The Segal-Bargmann transform for noncompact symmetric spaces.*

Previous work of B. Hall, later clarified by M. Stenzel, generalized the classical Segal-Bargmann transform to compact symmetric spaces. This generalization is geometrically very natural, being defined in terms of the spectral resolution of the Laplacian on the compact symmetric space. As noncompact symmetric spaces are dual to the compact symmetric spaces, it is reasonable to pursue a generalization of the Segal-Bargmann transform for these manifolds. This talk will describe an extension of the Segal-Bargmann transform for "radial" functions on noncompact symmetric spaces and the possibility of extending this isometry to include non-radial functions. (Received August 20, 2004)