

Meeting: 999, Nashville, Tennessee, SS 7A, Special Session on Operator Theory on Function Spaces

999-47-46 **Kunyu Guo*** (kyguo@fudan.edu.cn), Department of mathematics, Fudan university, 200433
Shanghai, Peoples Rep of China. *Defect operators of analytic Hilbert modules*. Preliminary report.

This talk mainly concerns defect operators and defect functions of Arveson submodules, Hardy submodules, Bergman submodules in several variables. The defect operator (function) carries key information about operator theory (function theory) and structure of analytic submodules. The problem when a submodule has finite defect is attacked for Arveson submodules, Hardy submodules and Bergman submodules. Our interest will be in submodules generated by polynomials. The reason for choosing such submodules is to understand the interaction of operator theory, function theory and algebraic geometry. The talk will also concern homogeneous Arveson submodules because such submodules play an important role in geometric analysis of Hilbert modules. (Received July 23, 2004)