Department of Mathematics and Statistics
Mississippi State University

Colloquium

Schatten class membership of Hankel Operators on the Unit Sphere

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Thursday, February 26 at 3:30 pm

Allen 14

Abstract. Let H_f be a Hankel operator on the Hardy space of the unit sphere in $\mathbb{C}^n$, $n \geq 2$. A key feature of this investigation is that we consider all possible symbol functions f in the L^2 of the sphere. We completely determine the membership of H_f in the Schatten class $\mathcal{C}_p$. In the case $p > 2n$, $H_f \in \mathcal{C}_p$ if and only if H_f maps the constant function 1 into the Besov space $\mathcal{B}_p$. In the case $p \leq 2n$, the membership $H_f \in \mathcal{C}_p$ implies $H_f = 0$.
This is a joint work with Jingbo Xia.

Dr. Fang is a candidate for a position in our department. There will be a reception for her in Allen 467 at 4:30 pm following her talk.