

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

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Corona Solutions on the Polydisk in C^n belonging to the Orlicz-type Space $\exp(L^{\frac{1}{2n-1}})$.

For the corona problem on the polydisk, D^n , and with a finite number of input functions, Varopoulos and Lin, independently, found implicit solutions belonging to $\bigcap_{p=1}^{\infty} H^p(D^n)$. For a countable number of input functions, we give explicit solutions belonging to the Orlicz-type space $\exp(L^{\frac{1}{2n-1}})$. Note that $H^\infty(D^n) - BMO(D^n) \subsetneq \exp(L^{\frac{1}{2n-1}}) \subsetneq \bigcap_{p=1}^{\infty} H^p(D^n)$. For 2 input functions, Amar and Cegrell have found explicit solutions belonging to $H^\infty(D^n) - BMO(D^n)$. (Received August 23, 2004)