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$W^{2,k}_{Cl_n}$-Best Approximation of a γ-Regular Function

We construct γ-regular Cl_n-minimal function systems in $W^{2,k}_{\Gamma}(\Omega, Cl_n) \cap \ker D_\gamma(\Omega, Cl_n)$, the generalized Bergman space of Cl_n-valued functions in the Sobolev space $W^{2,k}_{\Gamma}(\Omega)$ which are used in the best way to approximate null solutions of the in-homogeneous Dirac operator.

Keywords: Clifford analysis, in-homogeneous Dirac operator, elliptic boundary value problems, minimal systems.

MSC: 30G35, 35A35, 35A22, 35C15, 35F15