

Hypercomplex Functional Calculi and Function Theories in Clifford Analysis

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Abstract. Some properties of hypercomplex functions (the null solutions of the polynomial Dirac operators in R^{n+1}) in Clifford Analysis are discussed, their hypercomplex functional calculi for an n -tuple non-commuting self-adjoint operators A are constructed by the use of Cauchy integral formulas, the polynomial approaches to functional calculi are also considered. Although these hypercomplex function theories have different representative forms, their hypercomplex functional calculi are the same as the monogenic functional calculus.

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