

SEMINARIO DI GEOMETRIA E ALGEBRA

UNIBA - POLIBA

Giovedì 17 Luglio 2025 - Ore 15:00

Dipartimento di Matematica UniBa, Aula X, primo piano

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Dunkl approach to slice regular functions

Abstract. In this talk, we establish a connection between Dunkl analysis and slice analysis in the setting of Clifford algebras. Specifically, we show that a Clifford algebra-valued function is slice if, and only if, it belongs to the kernel of the Dunkl-spherical Dirac operator and that a slice function is slice regular if, and only if, it lies in the kernel of the Dunkl-Cauchy-Riemann operator for a suitable parameter. Based on this correspondence and the inverse Dunkl intertwining operator, we propose a new method to construct a family of classical monogenic functions from a given holomorphic function, in the spirit of Fueter's theorem.

Seminario finanziato dal PRIN2022 *Interactions between Geometric Structures and Function Theories*.



Finanziato
dall'Unione europea
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