

An algebraic approach to fractional derivatives

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SUMMARY

The problem of constructing fractional derivatives is included in a general algebraic problem dealing with the interpolation of the classical derivative and integral by a one parameter family of operators satisfying a given finite set of constraints. The Riemann-Liouville fractional derivative is then seen as a canonical solution to such an algebraic problem.

Keywords: fractional calculus, Riemann-Liouville fractional derivatives

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