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HERMITE–HADAMARD INTEGRAL INEQUALITY FOR HARMONICALLY CONVEX FUNCTIONS VIA RIEMANN–LIOUVILLE FRACTIONAL INTEGRALS

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Abstract. The concept of convexity of functions is a useful instrument that is used to solve a wide range of pure and applied scientific issues. The Hermite-Hadamard inequality which is also used frequently in many other parts of practical mathematics notably in optimization and probability is one of the most important mathematical inequalities relevant to convex maps. The fractional calculus, a calculus of non-integer order has applications in diverse fields of physical sciences. In this paper, we have established Hermite-Hadamard's inequalities via Riemann-Liouville fractional integral for the case of harmonically convex function as well as the products of two harmonically convex functions via Riemann-Liouville fractional integrals.

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