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Generalized Tri-recurrent Finsler Space Under Cartan-Type Mixed Covariant Derivatives

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Abstract: *In this paper, we concentrate on a new Finsler space that is a combination of two types of Cartan derivatives of third order for Berwald curvature tensor H^i_{jkh}. We find the condition that Berwald curvature tensor H^i_{jkh} is special generalized of generalized mixed trirecurrent. Furthermore, we show that the normal projective curvature tensor N^i_{jkh} is generalized $hv-$ mixed trirecurrent if and only if the tensor $\dot{\partial}_j(H_{hk}-H_{kh})$ behaves as mixed trirecurrent. Also, the Ricci tensor N_{jk} of the normal projective curvature tensor N^i_{jkh} is non – vanishing if and only if the tensor $((1-n)\dot{\partial}_j\dot{\partial}_k H+H_{jk}+H_{kj})$ is mixed trirecurrent.*

Keywords: Generalized H^{hv} – mixed trirecurrent space, $hv-$covariant derivative of mixed second order, Berwald curvature tensor H^i_{jkh} , Normal curvature tensor N^i_{jkh}

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