Year: 2013 | **Vol.: 82** | **Fasc.: 1**

Title: Finsler connection properties generated by the two-vector angle developed on the indicatrix-inhomogeneous level

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The Finsler spaces in which the tangent Riemannian spaces are conformally flat prove to be characterized by the condition that the indicatrix is a space of constant curvature. In such spaces the Finslerian two-vector angle can be obtained from the respective two-vector angle of the associated Riemannian space. This observation entails the problem to obtain the angle-preserving connection on general indicatrix-inhomogeneous level, that is, when the indicatrix curvature value $\mathcal{C}_{Ind}$ is permitted to be an arbitrary smooth function of the indicatrix position point x. The problem has been completely solved by means of the proposed method to determine the coefficients of nonlinear connection from the separable equation of preservation of the normalized angle. The obtained connection is metrical with the deflection part which is proportional to the gradient of the function $H(x)$ entering the equality $\mathcal{C}_{Ind} \equiv H^2$, and is uniquely determined up to the torsion tensor of the associated Riemannian space. Also, the involved deformation of space is covariant-constant. Important tensorial information is obtainable by the help of the coincidence-limit method applied to geodesics of the indicatrix space. When the transitivity of covariant derivative is used, from the commutators of covariant derivatives the associated curvature tensor can be found. The developed theory is applied to the Finsleroid space.

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