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Erratum

to the paper "Some results on the geometry of tangent bundle of Finsler manifolds", Publ. Math. Debrecen (2007), 185–193

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The formula (4.3) is incorrect. It should be the following:

$$
\begin{aligned}
\widetilde{R}\left(\frac{\partial}{\partial y^i},\frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k} &= \widetilde{\nabla}_{\frac{\partial}{\partial y^i}}\widetilde{\nabla}_{\frac{\partial}{\partial y^j}}\frac{\partial}{\partial y^k} - \widetilde{\nabla}_{\frac{\partial}{\partial y^j}}\widetilde{\nabla}_{\frac{\partial}{\partial y^i}}\frac{\partial}{\partial y^k} - \widetilde{\nabla}_{[\frac{\partial}{\partial y^i},\frac{\partial}{\partial y^j}]}\frac{\partial}{\partial y^k} \\
&= \left(\frac{\partial L^l_{jk}}{\partial y^i} - \frac{\partial L^l_{ik}}{\partial y^j} + L^s_{jk}C^l_{si} + C^s_{jk}L^l_{si} - L^s_{ik}C^l_{sj} - C^s_{ik}L^l_{sj}\right. \\
&\quad \left. + \frac{1}{2}L^t_{jk}y^s R_{sit}{}^l - \frac{1}{2}L^t_{ik}y^s R_{sjt}{}^l\right)\frac{\delta}{\delta x^l} \\
&\quad + \left(L^s_{ik}L^l_{js} - L^s_{jk}L^l_{si} + C^s_{ik}C^l_{js} - C^s_{jk}C^l_{si}\right)\frac{\partial}{\partial y^l},
\end{aligned}
\tag{4.3}
$$

here the last two terms $C^s_{ik}C^l_{js} - C^s_{jk}C^l_{si}$ were missed in the original paper. Fortunately, we need only to make a minor modification. Assume that $\widetilde{\nabla}\widetilde{R} = 0$, then by (2.3), (4.3), (4.4) and Lemma 2.1 we have

$$
\begin{aligned}
0 = y^j\left(\widetilde{\nabla}_\eta\widetilde{R}\right)\left(\frac{\partial}{\partial y^i},\frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k} &= y^j\widetilde{\nabla}_\eta\left(\widetilde{R}\left(\frac{\partial}{\partial y^i},\frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k}\right) \\
= -y^j\frac{\partial L^l_{jk}}{\partial y^i}\frac{\delta}{\delta x^l} = L^l_{ik}\frac{\delta}{\delta x^l},
\end{aligned}
$$

and hence, $L^i_{jk} = 0$, which together with (4.3) yields

$$
\widetilde{R}\left(\frac{\partial}{\partial y^i},\frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k} = \left(C^s_{ik}C^l_{js} - C^s_{jk}C^l_{si}\right)\frac{\partial}{\partial y^l}.
$$

The author is indebted to Professor Aurel Bejancu for pointing out the mistake.

Consequently,

$$0 = \left(\widetilde{\nabla}_\eta \widetilde{R}\right)\left(\frac{\partial}{\partial y^i}, \frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k} = -2\left(C^s_{ik}C^l_{js} - C^s_{jk}C^l_{si}\right)\frac{\partial}{\partial y^l},$$

and we again arrive at $\widetilde{R}\left(\frac{\partial}{\partial y^i}, \frac{\partial}{\partial y^j}\right)\frac{\partial}{\partial y^k} = 0$.

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