



## Correction to: A note on Euler number of locally conformally Kähler manifolds

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Our aim is to clarify the Definition 2.8 in the original article. Let  $(M, J, g)$  be a compact  $2n$ -dimensional LCK manifold with the Lee form  $\theta$ . We denote by  $(\tilde{M}, \tilde{J}, \tilde{g})$  the universal covering space of  $(M, J, g)$  and  $\tilde{\theta} := d\tilde{f}$  the lifted Lee form. We call  $(M, J, g)$  a  $d$ (bounded) LCK manifold, if  $f$  is bounded. But in fact when the function  $f$  is bounded, then LCK manifold must be globally conformal Kähler. Because  $d\tilde{f}$  should be invariant to the action of the fundamental group  $\pi_1(M)$  and then, for any  $\gamma \in \pi_1(M)$  and any positive integer  $n$  we have  $(\gamma^n)^* f = f + nc_\gamma$ . If  $M$  is LCK and not GCK, we know that  $\pi_1(M)$  contains an infinite cyclic subgroup, say  $G$ . Then  $(\gamma^n)^* f = f + nc_\gamma$  makes no sense for  $\gamma \in G$ . This was pointed out by an email from Professor Liviu. Our proof is correct in the original article, so the Theorem 1.1 only be established in the GCK case.

In addition, I found that reference [5] in the original article is not the article that I cited. My actual reference should be “Carron, G.,  *$L^2$  harmonic forms on non-compact Riemannian manifolds*. Surveys in analysis and operator theory (Canberra, 2001), 49–59.”

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