CORRIGENDUM TO "PRESCRIBING A RICCI TENSOR IN A CONFORMAL CLASS OF RIEMANNIAN METRICS"

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(Communicated by Peter Li)

I would like to make some corrections to my paper [1]. On p. 456, formula (2) should read

$$(n-2)\operatorname{Hess}(u) + \left(\Delta u - (n-1)\frac{|\nabla u|^2}{u}\right)g = 0.$$

This is because, on p. 457, line 8 should read

$$\widehat{R}_{ij} = R_{ij} + e^{\varphi} \left[(n-2) \operatorname{Hess}(u)_{ij} + \left(\Delta u - (n-1) \frac{|\nabla u|^2}{u} \right) g_{ij} \right].$$

Due to this change, in formula (5) on p. 457 the second term should be positive and the third term should be negative. In the formula on line 15 the second term should be positive and the third term should be negative. On line 17, the coefficient of Δu is then $(\frac{1}{n} + \frac{1}{n-2})$ and the second term is negative. Therefore formula (6) should have no coefficient (n-1) on the second term.

On p. 457, line 21, there should be no factor (n-1). Line 22 should read "Since n > 3, $n + 2 \ne 0$"

On p. 458, line 3 to line 9 should be replaced by: "hence, $ru_{rr} = u_r$. Solving this equation we get $u(r) = \frac{c}{2}r^2 + d$ where c and d are two constants. Applying formula (6) to this function u, we can get

$$c^2 \frac{n-1}{n} r^2 - \frac{2cd}{n} = 0.$$

Since r can take different values, c = 0. The proof is complete."

It is my pleasure to thank Professor Eric Baak for kindly pointing out the sign error in my formula (2).

REFERENCES

1. Xingwang Xu, Prescribing a Ricci tensor in a conformal class of Riemannian metrics, Proc. Amer. Math. Soc. 115 (1992), 455-459.

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