Erratum to: Connectedness properties of the space of complete nonnegatively curved planes

Igor Belegradek¹ · Jing Hu¹

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In Theorem 4.1 of the original article we claimed that a certain parametrization of the space of complete nonnegatively curved metrics on $\mathbb{R}^2$ was a homeomorphism, but the spaces were topologized incorrectly. The correct statement of Theorem 4.1 can be obtained by fixing any number α with $0 < \alpha < 1$ and replacing every entry of k with $k + \alpha$, i.e., the bijection (1.1) of the original article given by $(\phi, u) \rightarrow \phi^* e^{-2u} g_0$ is a homeomorphism if ϕ varies in the $C^{k+1+\alpha}$ topology while u and $\phi^* e^{-2u} g_0$ vary in the $C^{k+\alpha}$ topology. The discussion of Theorem 4.1 in the introduction to the original article must be modified accordingly.

The proof of Theorem 4.1 works as originally written once every entry of k is replaced by $k + \alpha$. Instead of basic facts about C^k maps one uses standard properties of Hölder spaces, see [1, Section 4.1] and [2, Section 2.2]. The mistake was due to the incorrect application of the Continuity Theorem proved in [3] for the $C^{k+\alpha}$ topology rather than the C^k topology. We suspect that the statement of Theorem 4.1 in the original article is false but have no counterexamples.

This change affects no other results in the original article because they only use continuity of the bijection (1.1) when ϕ and u vary in the C^∞ topology and $\phi^* e^{-2u} g_0$ varies in the C^k topology.

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✉ Igor Belegradek
ib@math.gatech.edu

Jing Hu
jhu61@math.gatech.edu

¹ School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332-0160, USA

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