

Errata to “Analytic Conformal Blocks of C2-cofinite Vertex Operator Algebras III: The Sewing-Factorization Theorems”

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1. Sec. 1.1, the line before Eq. (1.2). The relation $L_i(n) = Y_i(\mathbf{c})_{n-1}$ should be $L_i(n) = Y_i(\mathbf{c})_{n+1}$. The same typo appears in the paper *Analytic Conformal Blocks of C2-cofinite Vertex Operator Algebras II: Convergence of Sewing and Higher Genus Pseudo- q -traces*.
2. In Lem. 1.10, the conclusion

$$\sum_{m \in \mathbb{N}} |c_{m,k}^\alpha| \cdot r^m < +\infty \quad \sum_{n \in \mathbb{N}} |c_{k,n}^\alpha| \cdot \rho^n < +\infty$$

should be replaced by the weaker statement that for each $0 \leq r_0 < r$ and $0 \leq \rho_0 < \rho$ we have

$$\sum_{m \in \mathbb{N}} |c_{m,k}^\alpha| \cdot r_0^m < +\infty \quad \sum_{n \in \mathbb{N}} |c_{k,n}^\alpha| \cdot \rho_0^n < +\infty$$

This is because for any holomorphic function $f(z) = \sum_{n \in \mathbb{N}} a_n z^n$ defined on $|z| < r$ we only have $\sum_{n \in \mathbb{N}} |a_n| r_0^n < +\infty$ for $0 \leq r_0 < r$.

3. The global assumption Asmp. 1.3 is not sufficient for Thm. 1.11 to hold. One should instead assume the condition mentioned at the beginning of Ch. 2; namely, that each connected component of $\tilde{\mathcal{C}}$ contains one of $\varsigma_1, \dots, \varsigma_N$. This ensures that each irreducible component of the nodal fiber of $\mathfrak{X}$ intersects one of $\varsigma_1, \dots, \varsigma_N$, so that the condition of [Gui24, Thm. 2.3], used in the proof of Thm. 1.11, is satisfied.