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Erratum

Erratum to: Unitary Representations of Super Lie Groups and Applications to the Classification and Multiplet Structure of Super Particles

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Professor Hadi Salmasian has drawn our attention a misstatement in Lemma 1 where the correct statement should be $X\mathcal{B} \subset \mathcal{B}$. In the corrigendum below we insert this correction and a small set of consequent corrections in Lemma 1 as well as Propositions 2 and 3.

We thank professor Salmasian for this.

1. p. 222: In item (ii) of Lemma 1, replace "such that $X\mathcal{B} \subset D(X)$" with "such that $X\mathcal{B} \subset \mathcal{B}$".
2. p. 222: In the last statement of Lemma 1, replace "if we only assume that $\mathcal{B}$ is invariant under H and contains a dense set of analytic vectors" with "if we only assume that $\mathcal{B} \subset D(H)$ and contains a dense set of analytic vectors for H".
3. p. 222: In the last paragraph of the proof of Lemma 1, replace "Finally, let us assume that $H\mathcal{B} \subset \mathcal{B}$ and that $\mathcal{B}$ contains a dense set of analytic vectors for H" with "Finally, let us assume that $\mathcal{B} \subset D(H)$ and that $\mathcal{B}$ contains a dense set of analytic vectors for H".
4. p. 222: In the last paragraph of the proof of Lemma 1, replace "we have $X^{2n}\psi = H^n\psi \in \mathcal{B}$ and $X^{2n+1}\psi \in D(X)$ by assumption, and" with "we have $\psi \in D(X^n)$ for all n by X-invariance of $\mathcal{B}$, and".
5. p. 226, last paragraph before Proposition 2: In item (b)-(vi), replace "$\rho(X)\mathcal{B} \subset D(\rho(Y))$ for all $X, Y \in \mathfrak{g}_1$" with "$\rho(X)\mathcal{B} \subset \mathcal{B}$ for all $X \in \mathfrak{g}_1$".
6. p. 227, in the proof of Proposition 2: Before the paragraph beginning with "It remains only to show...", add the following paragraph: "We now prove that, for all $X \in \mathfrak{g}_1$, the operator $\overline{\rho}(X)$ is odd on $C^\infty(\pi_0)$. If $P_i : \mathcal{H} \to \mathcal{H}$ is the orthogonal projection onto $\mathcal{H}_i$, then $P_i\mathcal{B} \subset \mathcal{B}$, and $\rho(X)P_i\psi = P_{i+1\,(\mathrm{mod}\,2)}\rho(X)\psi$ for all $\psi \in \mathcal{B}$

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by item (iii). If $\psi \in C^{\infty}(\pi_0)$ and (ψ_n) is a sequence in $\mathcal{B}$ such that $\psi_n \to \psi$ and $\rho(X)\psi_n \to \overline{\rho(X)}\psi$, then $P_i\psi_n \to P_i\psi$ and $\rho(X)P_i\psi_n = P_{i+1\,(\mathrm{mod}\,2)}\rho(X)\psi_n \to P_{i+1\,(\mathrm{mod}\,2)}\overline{\rho(X)}\psi$. Thus we have $\overline{\rho(X)}P_i\psi = P_{i+1\,(\mathrm{mod}\,2)}\overline{\rho(X)}\psi$, and the claim follows."

7. p. 227, item (i) in the statement of Proposition 2: Replace "so that π, as in Proposition (1), is a representation of $\mathfrak{g}$ in $C^{\infty}(\pi_0)$" with "so that π, as in Proposition 1, restricts to a representation of $\mathfrak{g}$ in $C^{\omega}(\pi_0)$".

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