Errata

Corrections to the article "Sharp Fronts of Paired Oscillatory Integrals"

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It was pointed out to me by David Finch that my definition on p. 62 of Petrovsky chains and cycles for half-integral q does not make sense, although Figure 2, illustrating these objects for $N=2$, is correct. I submit a corrected definition, replacing lines 4-19 of p. 62.

2. Half-integral q. Let Z be the two-sheeted cover of $\Omega\times X$ consisting of all (x,θ,θ_N) with (x,θ) in $X\times\Omega$ and $\theta_N^2-\varphi(x,\theta)=0$. Let U be an open part of $X\times\mathrm{Re}\,\Omega$ and construct C^∞ chains $c(x)$: $(\theta,t)\to v(x,\theta,t)$ with the properties (i), (ii), (iii) above. Let $c_\varepsilon(x)$ and $\overline{c_\varepsilon(x)}$ denote chains obtained from $c(x)$ and $\overline{c(x)}$ respectively by lifting them to Z. The lifting should be done in such a way that they belong to the same sheet of Z over the part $\phi_\varepsilon(x)$ of $\mathrm{Re}\,\Omega$ defined by $\varepsilon\varphi(x,\theta)>0$. It is easy to check that this definition is consistent and that the lifted chains will then belong to different sheets over $\phi_{-\varepsilon}(x)$. The construction is also unambiguous apart from a choice of the sign of $\varphi^{1/2}$ at one point (when U is connected).

Definition. A Petrovsky chain for half-integral q is

$$A(x,q,\varepsilon)=c_\varepsilon(x)+\overline{c_\varepsilon(x)}\subset Z\setminus\phi(x).$$

A Petrovsky cycle is

$$\alpha(x,q,\varepsilon)=\partial A(x,q,\varepsilon)\subset Z\setminus\phi(x).$$

There are also minor misprints as follows. A figure 1.1 means page 1, line 1, a figure 1.1− page 1, line 1 from the bottom.

53.15− read 'contains'. 55.11− read 'regular'. 56.2 a sign '$\sim$' is missing in the formula (5). 56.7− read '$a\to a'$'. 57.10 read '$\gamma>0$'. 57.12 read '$\gamma=1$'. 57.8− read '$p!$'. 59.15 read '$-\varphi(x,\theta)$'. 60.1 read 'manifold'. 60.12 for k read 'μ'. 61.13 read '$\partial g/\partial\bar{\theta}$ vanishes of infinite order'. 65.5− read 'Then'. 65.1− read '$s\to$'. 66.8− read 'φ has'.

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