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Erratum on "Singular Limit of a p-Laplacian Reaction-Diffusion Equation with a Spatially Inhomogeneous Reaction Term"

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The purpose of this note is to correct some coefficients in the formulas of the paper [1].

In paper [1], the formula (2.6) should be

$$(p-1)a^p(x)U_{0\xi}^{p-2}U_{0\xi\xi}+b^p(x)f(U_0)=0.$$

Equation (2.7) should be

$$\begin{aligned}U_{0\xi}d_{0t}=&U_{0\xi}^{p-1}\nabla d_0\cdot\nabla a^p+(p-1)(p-2)a^pU_{0\xi}^{p-3}U_{0\xi\xi}\nabla d_0\cdot\nabla U_0\\&+(p-1)(p-2)a^pU_{0\xi}^{p-3}U_{0\xi\xi}U_{1\xi}+2(p-1)a^pU_{0\xi}^{p-2}\nabla d_0\cdot\nabla U_{0\xi}\\&+a^pU_{0\xi}^{p-1}\Delta d_0+(p-1)a^pU_{0\xi}^{p-2}U_{1\xi\xi}+b^pf'(U_0)U_1.\end{aligned}$$

The coefficients of other formulas are corrected correspondingly. The final equation (2.14) should be

$$V=-\frac{g_p}{g_2\omega^{p-2}}\left[(N-1)a^2b^{p-2}\kappa+ab^{p-2}\frac{\partial a}{\partial n}+(p-1)a^2b^{p-3}\frac{\partial b}{\partial n}\right],$$

where $\omega:=(p-1)^{1/p}$.

References

1. Lou, B.: Singular limit of a p-Laplacian reaction-diffusion equation with a spatially inhomogeneous reaction term. J. Stat. Phys. **110**, 377–383 (2003)

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